STATE OF ALASKA

AMENDMENT TO PROFESSIONAL SERVICES CONTRACT

1. Agency Contract Number 2013-0200-1232	2. DGS Solicitation Number/Contract Title Work Order Contract	3. Optional Renewal? Yes
4. Financial Coding	5. Agency Assigned Encumbrance Number	6. Amendment No. ONE

This agreement is between the State of Alaska,

7. Department of / Division of
Administration / Enterprise Technology Services hereafter the State, and

8. Contractor
World Wide Technology Inc. hereafter the Contractor

Mailing Address	Street or P.O. Box	City	State	ZIP Code
60 Weldon Parkway		Maryland Heights	MO	63043

9. Original period of performance	10. Amended period of performance
FROM: July 1, 2013 TO: June 30, 2016	FROM: July 1, 2016 TO: June 30, 2019

11. Previous amount of contract to date: $30,000,000.00	12. Amount of this amendment: $0.00	13. This amended contract shall not exceed a total of $30,000,000.00

In accordance with the provisions of the above referenced contract, the parties to that contract agree that the services to be performed by the contractor under the contract are amended as follows: (Use reverse for continuation of amended provisions if necessary.)

14. This Amendment Serves To:

Exercise the single three-year renewal option to extend the contract period of performance from July 1st, 2016, through June 30, 2019. All other terms and conditions of the contract remain in effect.

IN WITNESS WHEREOF the parties hereto have executed this amendment.

NOTICE! This amendment has no effect until signed by the head of the contracting agency, procurement officer or designee.

15. CONTRACTOR

Name of Firm
World Wide Technology Inc.

Signature of Authorized Representative | Date 5/25/2016

Typed or Printed Name of Authorized Representative
Joe Koenig

Title
President

16. CONTRACTING AGENCY

Department/Division
Administration /Enterprise Technology Services

Signature of Project Director | Date 6-23-16

Typed or Printed Name of Project Director
Jim Steele

Title
Director, Division of Enterprise Technology Services

17. CERTIFICATION: I certify that the facts herein and on supporting documents are correct, that this voucher constitutes a legal charge against funds and appropriations cited, that sufficient funds are encumbered to pay this obligation, or that there is a sufficient balance in the appropriation cited to cover this obligation. I am aware that to knowingly make or allow false entries or alterations on a public record, or knowingly make or allow false entries or alterations on a public record, or knowingly destroy, mutilate, suppress, conceal, remove or otherwise impair the verity, legibility or availability of a public record constitutes tampering with public records punishable under AS 11.56.815 - .820. Other disciplinary action may be taken up to and including dismissal.

Signature of Head Contracting Agency or Designee | Date 6/23/16

Typed or Printed Name of Authorizing Official
Cheri Lowenstein

Title
Director, Division of Administrative Services

2013-0200-1232			
5. Vendor Number	6. Project/Case Number	7. Alaska Business License Number 314138	

This contract is between the State of Alaska,

8. Department of ADMINISTRATION	Division ENTERPRISE TECHNOLOGY SERVICES	hereafter the State, and

9. Contractor
WORLD WIDE TECHNOLOGY, INC (WWT) — hereafter the Contractor

Mailing Address	Street or P.O. Box	City	State	ZIP+4
60 WELDON PARKWAY		MARYLAND HEIGHTS	MO	63043

10.

ARTICLE 1. Appendices: Appendices referred to in this contract and attached to it are considered part of it.

ARTICLE 2. Performance of Service:

2.1 Appendix A (General Provisions), Articles 1 through 14, governs the performance of services under this contract.
2.2 Appendix B sets forth the liability and insurance provisions of this contract.
2.3 Appendix C sets forth the services to be performed by the contractor.

ARTICLE 3. Period of Performance: The period of performance for this contract begins JULY 1, 2013, and ends JUNE 30, 2016.

ARTICLE 4. Considerations:

4.1 In full consideration of the contractor's performance under this contract, the State shall pay the contractor a sum not to exceed $30,000,000.00 in accordance with the provisions of Appendix D.
4.2 When billing the State, the contractor shall refer to the Authority Number or the Agency Contract Number and send the billing to:

11. Department of VARIOUS DEPARTMENTS STATEWIDE (SEE RFP/APPENDIX E)	Attention: Division of
Mailing Address 333 WILLOUGHBY AVE. 10TH FL PO BOX 110208 JUNEAU, AK 99811-0208	Attention:

12. CONTRACTOR	
Name of Firm WORLD WIDE TECHNOLOGY, INC (WWT)	
Signature of Authorized Representative	Date 6/17/13
Typed or Printed Name of Authorized Representative Joe Austerman	
Title Account Executive	

14. **CERTIFICATION:** I certify that the facts herein and on supporting documents are correct, that this voucher constitutes a legal charge against funds and appropriations cited, that sufficient funds are encumbered to pay this obligation, or that there is a sufficient balance in the appropriation cited to cover this obligation. I am aware that to knowingly make or allow false entries or alternations on a public record, or knowingly destroy, mutilate, suppress, conceal, remove or otherwise impair the verity, legibility or availability of a public record constitutes tampering with public records punishable under AS 11.56.815-.820. Other disciplinary action may be taken up to and including dismissal.

Shua D. BOHNA PSV 6/27/13

13. CONTRACTING AGENCY		Signature of Head of Contracting Agency or Designee	Date
Department/Division ADMINISTRATION/ENTERPRISE TECHNOLOGY SERVICES (ETS)	Date 6/20/13		6/27/13
Signature of Project Director JIM BATES		Typed or Printed Name CHERI LOWENSTEIN	
Typed or Printed Name of Project Director JIM BATES		Title DIRECTOR	
Title DIRECTOR			

NOTICE: This contract has no effect until signed by the head of contracting agency or designee.

APPENDIX A

GENERAL PROVISIONS

Article 1. Definitions.

1.1 In this contract and appendices, "Project Director" or "Agency Head" or "Procurement Officer" means the person who signs this contract on behalf of the Requesting Agency and includes a successor or authorized representative.

1.2 "State Contracting Agency" means the department for which this contract is to be performed and for which the Commissioner or Authorized Designee acted in signing this contract.

Article 2. Inspections and Reports.

2.1 The department may inspect, in the manner and at reasonable times it considers appropriate, all the contractor's facilities and activities under this contract.

2.2 The contractor shall make progress and other reports in the manner and at the times the department reasonably requires.

Article 3. Disputes.

3.1 Any dispute concerning a question of fact arising under this contract which is not disposed of by mutual agreement shall be decided in accordance with AS 36.30.620-632.

Article 4. Equal Employment Opportunity.

4.1 The contractor may not discriminate against any employee or applicant for employment because of race, religion, color, national origin, or because of age, disability, sex, marital status, changes in marital status, pregnancy or parenthood when the reasonable demands of the position(s) do not require distinction on the basis of age, disability, sex, marital status, changes in marital status, pregnancy, or parenthood. The contractor shall take affirmative action to insure that the applicants are considered for employment and that employees are treated during employment without unlawful regard to their race, color, religion, national origin, ancestry, disability, age, sex, marital status, changes in marital status, changes in marital status, pregnancy or parenthood. This action must include, but need not be limited to, the following: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship. The contractor shall post in conspicuous places, available to employees and applicants for employment, notices setting out the provisions of this paragraph.

4.2 The contractor shall state, in all solicitations or advertisements for employees to work on State of Alaska contract jobs, that it is an equal opportunity employer and that all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, age, disability, sex, marital status, changes in marital status, pregnancy or parenthood.

4.3 The contractor shall send to each labor union or representative of workers with which the contractor has a collective bargaining agreement or other contract or understanding a notice advising the labor union or workers' compensation representative of the contractor's commitments under this article and post copies of the notice in conspicuous places available to all employees and applicants for employment.

4.4 The contractor shall include the provisions of this article in every contract, and shall require the inclusion of these provisions in every contract entered into by any of its subcontractors, so that those provisions will be binding upon each subcontractor. For the purpose of including those provisions in any contract or subcontract, as required by this contract, “contractor” and “subcontractor” may be changed to reflect appropriately the name or designation of the parties of the contract or subcontract.

4.5 The contractor shall cooperate fully with State efforts which seek to deal with the problem of unlawful discrimination, and with all other State efforts to guarantee fair employment practices under this contract, and promptly comply with all requests and directions from the State Commission for Human Rights or any of its officers or agents relating to prevention of discriminatory employment practices.

4.6 Full cooperation in paragraph 4.5 includes, but is not limited to, being a witness in any proceeding involving questions of unlawful discrimination if that is requested by any official or agency of the State of Alaska; permitting employees of the contractor to be witnesses or complainants in any proceeding involving questions of unlawful discrimination, if that is requested by any official or agency of the State of Alaska; participating in meetings; submitting periodic reports on the equal employment aspects of present and future employment; assisting inspection of the contractor's facilities; and promptly complying with all State directives considered essential by any office or agency of the State of Alaska to insure compliance with all federal and State laws, regulations, and policies pertaining to the prevention of discriminatory employment practices.

4.7 Failure to perform under this article constitutes a material breach of contract.

Article 5. Termination.

The Project Director, by written notice, may terminate this contract, in whole or in part, when it is in the best interest of the State. The State is liable only for payment in accordance with the payment provisions of this contract for services rendered before the effective date of termination.

Article 6. No Assignment or Delegation.

The contractor may not assign or delegate this contract, or any part of it, or any right to any of the money to be paid under it, except with the written consent of the Project Director and the Agency Head.

Article 7. No Additional Work or Material.

No claim for additional services, not specifically provided in this contract, performed or furnished by the contractor, will be allowed, nor may the contractor do any work or furnish any material not covered by the contract unless the work or material is ordered in writing by the Project Director and approved by the Agency Head.

Article 8. Independent Contractor.

The contractor and any agents and employees of the contractor act in an independent capacity and are not officers or employees or agents of the State in the performance of this contract.

Article 9. Payment of Taxes.

As a condition of performance of this contract, the contractor shall pay all federal, State, and local taxes incurred by the contractor and shall require their payment by any Subcontractor or any other persons in the performance of this contract. Satisfactory performance of this paragraph is a condition precedent to payment by the State under this contract.

Article 10. Ownership of Documents.
All designs, drawings, specifications, notes, artwork, and other work developed in the performance of this agreement are produced for hire and remain the sole property of the State of Alaska and may be used by the State for any other purpose without additional compensation to the contractor. The contractor agrees not to assert any rights and not to establish any claim under the design patent or copyright laws. The contractor, for a period of three years after final payment under this contract, agrees to furnish and provide access to all retained materials at the request of the Project Director. Unless otherwise directed by the Project Director, the contractor may retain copies of all the materials.

Article 11. Governing Law.
This contract is governed by the laws of the State of Alaska. All actions concerning this contract shall be brought in the Superior Court of the State of Alaska.

Article 12. Conflicting Provisions.
Unless specifically amended and approved by the Department of Law the General Provisions of this contract supersede any provisions in other appendices. The contractor specifically acknowledges and agrees that provisions in any form contracts it appends hereto that purport to (1) waive the State of Alaska's sovereign immunity, (2) impose indemnification obligations on the State of Alaska that are not conditioned on legislative appropriation, or (3) seek to limit liability of the contractor for acts of contractor negligence, are expressly superseded by this contract and are void.

Article 13. Officials Not to Benefit.
Contractor must comply with all applicable federal or State laws regulating ethical conduct of public officers and employees.

Article 14. Covenant Against Contingent Fees.
The contractor warrants that no person or agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee except employees or agencies maintained by the contractor for the purpose of securing business. For the breach or violation of this warranty, the State may terminate this contract without liability or in its discretion deduct from the contract price or consideration the full amount of the commission, percentage, brokerage or contingent fee.

APPENDIX B[1]
INDEMNITY AND INSURANCE

Article 1. Indemnification

The Contractor shall indemnify, hold harmless, and defend the contracting agency from and against any claim of, or liability for error, omission or negligent act of the Contractor under this agreement. The Contractor shall not be required to indemnify the contracting agency for a claim of, or liability for, the independent negligence of the contracting agency. If there is a claim of, or liability for, the joint negligent error or omission of the Contractor and the independent negligence of the Contracting agency, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. “Contractor” and “Contracting agency”, as used within this and the following article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term “independent negligence” is negligence other than in the Contracting agency’s selection, administration, monitoring, or controlling of the Contractor and in approving or accepting the Contractor’s work.

Article 2. Insurance

Without limiting Contractor's indemnification, it is agreed that Contractor shall purchase at its own expense and maintain in force at all times during the performance of services under this agreement the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the Contractor's policy contains higher limits, the state shall be entitled to coverage to the extent of such higher limits. Certificates of Insurance must be furnished to the Contracting Officer prior to beginning work and must provide for a notice of cancellation, nonrenewal, or material change of conditions in accordance with policy provisions. Failure to furnish satisfactory evidence of insurance or lapse of the policy is a material breach of this contract and shall be grounds for termination of the Contractor's services. All insurance policies shall comply with, and be issued by insurers licensed to transact the business of insurance under AS 21.

2.1 Workers' Compensation Insurance: The Contractor shall provide and maintain, for all employees engaged in work under this contract, coverage as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal U.S.L. & H. and Jones Act requirements. The policy must waive subrogation against the State.

2.2 Commercial General Liability Insurance: covering all business premises and operations used by the Contractor in the performance of services under this agreement with minimum coverage limits of $300,000. combined single limit per occurrence.

2.3 Commercial Automobile Liability Insurance: covering all vehicles used by the Contractor in the performance of services under this agreement with minimum coverage limits of $300,000. combined single limit per occurrence.

APPENDIX C
SCOPE OF WORK

The terms and conditions of this contract, including the scope of work/services provided, are contained in the following documents, incorporated by reference:

- **APPENDIX E: RFP #2013-0200-1232, Comprehensive Telecommunications Services,** as amended, issued by the Department of Administration, Division of Administrative Services;
- **APPENDIX F: Cost Proposal Submitted by World Wide Technology, Inc (WWT), May 30, 2013;**
- **APPENDIX G: Technical Proposal Submitted by World Wide Technology, Inc (WWT), May 30, 2013,** in response to RFP #2013-0200-1232.

In case of conflict, the following order of precedence shall govern:

1. This contract document, excluding Appendices E, F, and G;
2. Appendix E;
3. Appendix F; and,
4. Appendix G.

APPENDIX D
PAYMENT SCHEDULE

The State will make payments based on a negotiated payment schedule agreed to by the State and the Contractor at the time each Work Order (WO) is issued. Each billing must consist of an invoice and progress report as described in Section 5.02.03 of RFP #2013-0200-1232. No payment will be made until the deliverables, progress report, and invoice have been approved by the State Project Director and Work Order Manager.

However, up to 15% of all payments to the Contractor may be withheld, subject to agency acceptance of deliverables. Agencies may choose to withhold for the duration of the WO or for intermediate deliverables, as negotiated during the definition of the WO. Holdbacks are not mandatory and are strictly negotiable for each WO.

The Hourly Rates pricing in the Cost Proposal Submitted by World Wide Technology, Inc (WWT), May 30, 2013, will remain firm from July 1, 2013 through June 30, 2016.

APPENDIX E
RFP #2013-0200-1232/AMENDMENTS 1 through 9

World Wide Technology, Inc.

June 3, 2013

Mr. Bradley Kizer
State of Alaska
Division of Administrative Services
Commissioner's Office
10th Floor, State Office Building
333 Willoughby Avenue
Juneau, AK 99801

RE: WWT Response to State of Alaska Request for Proposal (RFP) for Comprehensive Telecommunications Services

Dear Mr. Kizer

World Wide Technology, Inc. (WWT) is pleased to present this cost proposal to State of Alaska (SOA), Department of Administration (DOA) for the Comprehensive Telecommunications Services project, RFP 2013-0200-1232.

WWT's Alaska Technical team, which is based in Anchorage, includes over 20 Cisco certified engineers, including CCNA, CCNP and CCIE for Voice. This team has vast experience in deploying and supporting IT technical solutions throughout Alaska. Many of these resources have been involved in supporting the SOA's network since the initial Telephone replacement that started in 2006.

Nationally, WWT has hundreds of advanced level resources, with capabilities spanning a broad range of technologies, who are available to serve Alaska when needed.

The following proposal complies with all provisions of the RFP and will remain valid for 90 days from the date of submission. World Wide Technology, Inc. has maintained a significant presence in Alaska for over seven years and operates under the Alaska Business license provided with Attachment C.

Please call me at 907-770-8387 to discuss any questions or comments you may have in regard to this proposal. We thank you for this opportunity.

Respectfully,

Joe Austerman
Account Manager
joe.austerman@wwt.com

ATTACHMENT D: COST PROPOSAL

OFFERORS COMPLETE THIS FORM AND RETURN WITH YOUR PROPOSAL.

Company Name: **World Wide Technology, Inc.**
Address: **60 Weldon Parkway**
Maryland Heights, MO 63043

The Categories listed below are based on historical data and work performed over the previous 12 months. ETS has extrapolated an estimated number of hours based on the work performed in that category and the level of experience. The "Hourly Rates" offered below will apply to all Work Orders, regardless of the number of hours per Work Order.

Please provide your "Firm's Hourly Rates" for the positions and categories listed for your cost. Your Cost Proposal pricing will be held firm for the first 3 years at which point a cost adjustment may be made by request, thirty (30) days before April 1, 2016. If the need to add additional categories is required in the future, those negotiations will be made at that time.

Data Center/Storage Networking/VM	Certification Requirements	Estimated Number of Hours	Firm Hourly Rates ANCHORAGE & JUNEAU	Total of Column D:E Multiplied by 3 for initial term of the contract	Firm Hourly Rates Outside of ANCHORAGE & JUNEAU	Total of Column D:G Multiplied by 3 for initial term of the contract
Entry	N/A	500	$ 40.00		$ 45.00	
Associate	CCNA Data Center	250	$ 75.00		$ 82.00	
Professional	CCNP Data Center	100	$ 170.00		$ 170.00	
Expert	CCIE Data Center	50	$ 200.00		$ 200.00	
Design	**Certification Requirements**	**Estimated Number of Hours**	**Firm Hourly Rates ANCHORAGE & JUNEAU**	**Total of Column D:E Multiplied by 3 for initial term of the contract**	**Firm Hourly Rates Outside of ANCHORAGE & JUNEAU**	**Total of Column D:G Multiplied by 3 for initial term of the contract**
Entry	CCENT/CCDA	500	$ 40.00		$ 45.00	
Associate	CCDP	250	$ 75.00		$ 82.00	
Professional	CCDE	100	$ 155.00		$ 165.00	
Expert	CCIE	50	$ 180.00		$ 190.00	

Network Routing & Switching/Voice	Certification Requirements	Estimated Number of Hours	Firm Hourly Rates ANCHORAGE & JUNEAU	Total of Column D:E Multiplied by 3 for initial term of the contract	Firm Hourly Rates Outside of ANCHORAGE & JUNEAU	Total of Column D:G Multiplied by 3 for initial term of the contract
Entry	CCENT	1000	$ 45.00		$ 50.00	
Associate	CCNA	750	$ 75.00		$ 82.00	
Professional	CCNP	250	$ 155.00		$ 165.00	
Expert	CCIE R&S	100	$ 180.00		$ 190.00	

Security VPN/ISE	Certification Requirements	Estimated Number of Hours	Firm Hourly Rates ANCHORAGE & JUNEAU	Total of Column D:E Multiplied by 3 for initial term of the contract	Firm Hourly Rates Outside of ANCHORAGE & JUNEAU	Total of Colu D:G Multiplied by 3 for initial term of the contract
Entry	CCENT	1000	$ 40.00		$ 45.00	
Associate	CCNA Security	750	$ 75.00		$ 82.00	
Professional	CCNP Security	250	$ 155.00		$ 165.00	
Expert	CCIE Security	100	$ 180.00		$ 190.00	
Network Wireless	**Certification Requirements**	**Estimated Number of Hours**	**Firm Hourly Rates ANCHORAGE & JUNEAU**	**Total of Column D:E Multiplied by 3 for initial term of the contract**	**Firm Hourly Rates Outside of ANCHORAGE & JUNEAU**	**Total of Column D:G Multiplied by 3 for initial term of the contract**
Entry	CCENT	150	$ 40.00		$ 45.00	
Associate	CCNA	100	$ 70.00		$ 77.00	
Professional	CCNP	50	$ 130.00		$ 140.00	
Expert	CCIE SAN	25	$ 160.00		$ 170.00	
	Project Management	**Estimated Number of Hours**	**Firm Hourly Rates ANCHORAGE & JUNEAU**	**Total of Column D:E Multiplied by 3 for initial term of the contract**	**Firm Hourly Rates Outside of ANCHORAGE & JUNEAU**	**Total of Column D:G Multiplied by 3 for initial term of the contract**
		500	$ 125.00		$ 125.00	

Total for Anchorage & Juneau	Total for O/Anchorage & Juneau	Total Cost

All estimates included in this section are provided for proposal evaluation purposes only, no minimum or maximum purchases are guaranteed.

The "Total Cost" will be determined by multiplying the "Hourly Rates" of each category by three (3) for a total cost proposal of the initial term of the resulting contract from this RFP.

The lowest total cost will receive the maximum number of points allocated to cost (**400 points**). The point allocations for cost will be determined through the method **set out in Section 2.15** (Formula Used to Convert Cost to Points).

Signed: Joe Austerman Date: 5/30/2013

Printed name: Joe Austerman Title: Account Executive

World Wide Technology, Inc.

June 3, 2013

Mr. Bradley Kizer
State of Alaska
Division of Administrative Services
Commissioner's Office
10th Floor, State Office Building
333 Willoughby Avenue
Juneau, AK 99801

RE: WWT Response to State of Alaska Request for Proposal (RFP) for Comprehensive Telecommunications Services

Dear Mr. Kizer:

World Wide Technology, Inc. (WWT) is pleased to present this response to State of Alaska (SOA), Department of Administration (DOA) for the Comprehensive Telecommunications Services project, RFP 2013-0200-1232.

Our organization is keenly aware of how important this contract is to Enterprise Technology Services (ETS) in assuring continuity of quality voice and data communications to the thousands of government and public users who rely on the SOA's network. The State of Alaska's IT network covers an exceptionally large geographic area serving over 16,000 State employees in 183 departments and agencies. Keeping pace with the myriad of network challenges, threats, as well as innovative opportunities while addressing the ever-changing needs of the end users who rely on IT as a service is a daunting task.

Over the past 23 years, WWT has grown to one of the most respected Information Technology systems integration organizations in the industry. In 2012, WWT exceeded $5 billion in annual revenue, and is honored to be ranked #24 on FORTUNE "100 Best Companies to Work For" List in 2013. Our approach and methodology goes beyond understanding the technical aspects of the growing number of manufacturer's developing an array of products to "improve" your network.

Advanced and leading edge technology is of little value if it is not properly integrated. The performance claims of manufacturer's products cannot be realized without proper deployment into the networks where the technology is needed. Furthermore, no two IT environments are the same and all have become more complex as multiple service offerings including: Voice, Data, Video, and more are being converged onto a single network. Understanding the interdependencies and downstream effects any time new technology is being integrated is critical in assuring success and the best performance of the network as a whole.

It is in this approach and understanding where WWT has distanced itself from other system integrators. WWT views the network and all of its parts as one, interdependent system, and through our own Advanced Technology Center (ATC) we routinely deploy, test, and gather feedback on the latest technology solutions being introduced by the world's leading IT manufacturers. From Cisco and NetApp to EMC and Citrix, WWT is a respected and trusted partner relied upon to assure their products perform at their best when deployed into any given IT environment.

In 2007, the SOA selected WWT for the comprehensive replacement of a failing PBX system to a converged Cisco voice and data over IP platform. Over a two- year period, WWT successfully migrated the majority of the SOA's 183 agencies to the more stable Cisco Voice over IP platform that reliably serves the State's voice and data communications needs. Today, the SOA has one of the most advanced and stable VoIP networks in the country.

Since the initial enterprise wide telephone replacement project, the SOA has leveraged WWT's expertise and institutional knowledge to provide professional services across a broad range of IT solutions. From VoIP and wireless to data center and security, WWT has proudly delivered on a wide variety of IT infrastructure projects that have significantly contributed to the quality of service appreciated by the SOA's end users.

The sum of WWT's experience, covering a large number of IT projects at the SOA, is the foundation of our value proposition in supporting ETS and serving the SOA in the future. Our ability to fully appreciate the broad network impacts and interdependencies of any IT initiative is intuitive to our Alaska team. This foundation of knowledge is embedded in a dedicated, local Alaska team that appreciates the value and significance of the SOA's mission in service to Alaskans.

We are confident this RFP response will demonstrate the unique qualifications WWT has to offer and the comprehensive value our organization can provide in continued service to the State of Alaska. Alaska continues to be recognized as one of the advanced regions in the company based on the local technical talent that supports the State of Alaska. We look forward to the opportunity of maintaining our working relationship with the ETS IT team in assuring the State's IT infrastructure meet the demanding needs of the dedicated state employees serving Alaska.

The following proposal complies with all provisions of the RFP and will remain valid for 90 days from the date of submission. World Wide Technology, Inc. has maintained a significant presence in Alaska for over seven years and operates under the Alaska Business license provided with Attachment C.

Please call me at 907-770-8387 to discuss any questions or comments you may have in regard to this proposal. We thank you for this opportunity.

Respectfully,

Joe Austerman
Account Manager
joe.austerman@wwt.com

ATTACHMENT C: OFFEROR INFORMATION & CERTIFICATION

OFFEROR INFORMATION

This form shall be the cover page for the Offeror's proposal. In the space provided, enter the requested Offeror Identification Information.

RFP Number:	**RFP: 2013-0200-1232**
RFP Name:	**COMPREHENSIVE TELECOMMUNICATIONS SERVICES**

Offeror Name:	World Wide Technology, Inc. (WWT)
Mailing Address:	60 Weldon Parkway Maryland Heights, MO 63043
Telephone Number:	314-569-7000
Fax Number:	314-569-8300
Federal Tax ID #:	43-1401900
Alaska Business License Number:	(23) Construction Line of Business: 932304 (54) Professional, Scientific and Technical Services: 314138

Contact Name:	Mr. Joe Austerman
Title:	Account Executive
E-Mail Address:	Joe.austerman@wwt.com
Alternate Phone Number:	907-770-8387

PROPOSAL CERTIFICATION:

BY SIGNATURE ON THIS PAGE, THE OFFEROR HEREBY CERTIFIES THAT ALL INFORMATION PROVIDED IS TRUE AND SERVES TO BIND THE OFFEROR TO THE PROVISIONS OF THE RFP.

SIGNATURE **DATE** 5/30/2013

JOE AUSTERMAN – ACCOUNT MANAGER
PRINT NAME AND TITLE

OFFEROR'S CERTIFICATION

Acknowledge the following statements by clearly marking the space provided. Failure to comply with these items may cause the proposal to be determined non-responsive.

	CONDITION/CERTIFICATION	RESPONSE
	Offeror certifies that 100% of all services provided under the resulting contract by the Offeror, joint venture partners, and all subcontractors shall be performed in the United States. That the Offeror is not established and headquartered or incorporated and headquartered in a country recognized as Tier 3 in the most recent US Dept of State's Trafficking in Persons Report per Section 1.05	☒ YES
	Offeror acknowledges that this engagement with the State is subject to the Alaska Public Records Act, AS 40.25.110 per Section 1.13	☒ YES
	Offeror complies with Section 1.16	☒ YES
	Offeror certifies that the firm or individuals working on the contract do not have any possible conflicts of interest per Section 1.17	☒ YES
	Offeror certifies that Offeror has a valid Alaska business license per Section 2.11	☒ YES
	Offeror understands and agrees to comply with all statutes, regulations, and policies regarding nondisclosure and confidentiality per Section 3.15	☒ YES

ALASKA BIDDER'S & VETERAN PREFERENCE

	Questions	ESPONSE
	Do you currently hold an Alaska business license?	☒ YES ☐ NO
	Is the company name submitted on this proposal the same name that appears on the current Alaska Business License?	☒ YES ☐ NO
	Has your company maintained a place of business within the SOA staffed by the Offeror or an employee of the Offeror for a period of six months immediately preceding the date of the proposal?	☒ YES ☐ NO
	Is your company incorporated or qualified to do business under the laws of the State, is a sole proprietorship and the proprietor is a resident of the State, is a limited liability company organized under AS 10.50 and all members are residents of the State, or is a partnership under former AS 32.05, AS 32.06, or AS 32.11 and all partners are residents of the State?	☒ YES ☐ NO
	Do you qualify for the Alaska Veteran Preference?	☐ YES ☒ NO

No. 34916
Effective: 11/27/2012
Expires: 12/31/2014

STATE OF ALASKA

DEPARTMENT OF COMMERCE, COMMUNITY & ECONOMIC DEVELOPMENT

Division of Corporations, Business and Professional Licensing
P.O. Box 110806, Juneau, Alaska 99811-0806

Certifies that

WORLD WIDE TECHNOLOGY, INC.

Is A Registered

General Contractor without Residential Contractor Endorsement

Commissioner: Susan K. Bell

Wallet Card

No. 34916 **State Of Alaska**

Department of Commerce, Community and Economic Development
Division of Corporations, Business and Professional Licensing
This Certifies That
WORLD WIDE TECHNOLOGY, INC.

Is A Registered
General Contractor without Residential Contractor Endorsement

Effective	Expiration	Date of Birth
11/27/2012	12/31/2014	

Signature _____

Per 12 AAC 02.900 Licensee shall maintain a current mailing address on file with this Division at all times.

If you wish to change to a residential contractor or downgrade to a specialty contractor, a new application is required. Changes to the ownership of the contractor registration (incorporation, addition or deletion of a partner(s)) or a name change requires a new application.

Please note: all General Contractor licenses expire on December 31 of even-numbered years regardless of the issue date.

Website: www.commerce.state.ak.us/occ/pcon.htm

WORLD WIDE TECHNOLOGY, INC.
60 WELDON PARKWAY
MARYLAND HEIGHTS MO 63043

CON

Alaska Business License # 314138

Alaska Department of Commerce, Community, and Economic Development
Division of Corporations, Business and Professional Licensing
P.O. Box 110806, Juneau, Alaska 99811-0806

This is to certify that

WORLD WIDE TECHNOLOGY, INC

60 WELDON PKWY MARYLAND HTS MO 63043

owned by

WORLD WIDE TECHNOLOGY, INC.

is licensed by the department to conduct business for the period

October 18, 2012 through December 31, 2014
for the following line of business:

54 - Professional, Scientific and Technical Services

This license shall not be taken as permission to do business in the state without having complied with the other requirements of the laws of the State or of the United States.

This license must be posted in a conspicuous place at the business location.
It is not transferable or assignable.

Susan K. Bell
Commissioner

Alaska Business License # **932304**

Alaska Department of Commerce, Community, and Economic Development
Division of Corporations, Business and Professional Licensing
P.O. Box 110806, Juneau, Alaska 99811-0806

This is to certify that

WORLD WIDE TECHNOLOGY, INC.

60 WELDON PARKWAY MARYLAND HEIGHTS MO 63043

owned by

WORLD WIDE TECHNOLOGY, INC.

is licensed by the department to conduct business for the period

October 18, 2012 through December 31, 2014
for the following line of business:

23 - Construction

This license shall not be taken as permission to do business in the state without having complied with the other requirements of the laws of the State or of the United States.

This license must be posted in a conspicuous place at the business location.
It is not transferable or assignable.

Susan K. Bell
Commissioner

Table of Contents

Statements and Affidavits 1
Subcontractors 1
Joint Ventures 2
Conflicts of Interest 2
Terms and Conditions 2
Prior Experience – Minimum Requirements (Section 2.08) 3
Personnel Experience and Qualifications (Section 7.03) 13
Organizational Charts 13
Category Positions – Definitions and Minimum Qualifications (Section 7.03.01) 15
Special Experience and Certification Requirements 16
Technical Proposal (Section 7.02) 17
Table of Contents 17
Offeror's Understanding and Methodologies (Section 7.02.01) 18
A) Offeror and Subcontractor information by Category 18
B) Offeror's Statement of RFP Understanding and Intent 38
C) Offeror's Project Management and Quality Assurance Methodology 40
D) Offeror's Work Order Cost Estimate Methodology 51
Offeror's Qualifications for Categories and Services (Section 7.02) 53
Table of Contents 53
Category 1: Telecommunications Consultant Services 54
Category 2: Telecommunications Planning, Analysis & Design 60
Category 3: Telephone Communications 65
Category 4: Radio Communications 72
Category 5: Data Communications 80
Category 6: Data Center Solutions 89
Category 7: Local Area Network 95

Attachments

1) UAA Letter of Recommendation
2) ASD Letter of Support
3) Proof of Cisco Gold Partnership
4) Certification Check List
5) WWT Category 1 Supplemental Information

Statements and Affidavits

Subcontractors

Subcontractors may be used to perform work under this contract. If an Offeror intends to use subcontractors, the Offeror must identify in the proposal the names of the subcontractors and the portions of the work the subcontractors may perform. Subcontractors may be used to meet the minimum requirements described in Section 2.08.

In the following table, WWT has identified the Subcontractors and the portions of the work they may perform based on the Categories defined in Section 5.03 of the RFP. Additional information for these subcontractors is provided in our response to the requirements in Section 7.02.01-A on Page 18.

Subcontractor Name	Portions of Work (by Category)
Telecom Concepts LLC	1 – Telco Consulting Services 7 – Local Area Network
GCI Communication Corp.	1 – Telecommunications Consultant Services 2 – Telecommunications Planning, Analysis & Design 3 – Telephone Communications 4 – Radio Communications 5 – Data Communications 6 – Data Center Solutions 7 – Local Area Network
Hot Wire Communications LLC	7 – Local Area Network
Denali Mechanical, Inc.	7 – Local Area Network
Alaska Commercial Contractors, Inc.	7 – Local Area Network
Eaton Corporation	7 – Local Area Network
Behrends Mechanical, Inc.	7 – Local Area Network
Aqueon	1 – Telecommunications Consultant Services
Cisco Advanced Services (Cisco AS)	1 – Telecommunications Consultant Services 3 – Telephone Communications 5 – Data Communications
Peak Signal	2 – Telecommunications Planning, Analysis & Design 4 – Radio Communications
B2 Networks	1 – Telecommunications Consultant Services 2 – Telecommunications Planning, Analysis & Design 5 – Data Communications 6 – Data Center Solutions 7 – Local Area Network
IPVision, Inc.	7 – Local Area Network
Graybar	1 – Telecommunications Consultant Services
Haight & Associates	1 – Telecommunications Consultant Services 7 – Local Area Network
North Slope Telecom	4 – Radio Communications
BTA	5 – Data Communications 6 – Data Center Solutions
Integrity Networks	6 – Data Center Solutions

Subcontractor Name	Portions of Work (by Category)
Arctic Air & Environmental Svcs	7 – Local Area Network
Albourn Construction	7 – Local Area Network
Tripp Lite	7 – Local Area Network

Joint Ventures

WWT is not proposing a joint venture with this offer.

Conflicts of Interest

WWT expects a high standard of integrity in its employees and subcontractors. If at any time a WWT employee or subcontractor believes that he or she may appear to be unable to maintain professional objectivity on this contract, because of a personal situation, employment, or other reasons, the employee or subcontractor will recuse himself from any position or task relating to this contract.

WWT and its subcontractors have no current conflict of interest with any employee or subcontractor that would work on this contract with State of Alaska

Terms and Conditions

WWT takes no exceptions to the General Provisions, Indemnity and Insurance or Terms and Conditions of the Proposal.

Prior Experience – Minimum Requirements (Section 2.08)

In order for the proposal to be considered responsive, offerors must provide proof they meet the following minimum requirements:

In the following submission, WWT has provided sufficient evidence of compliance by including details of numerous other engagements which meet the requirements and criteria in all seven sections. If SOA would like additional details around any of WWT's deployments, please reach out to your Account Manager, Joe Austerman.

1) Have designed and implemented a Wi-Fi wireless system that incorporates at least one hundred (100) Cisco access points, a wireless controller and/or a WLSE. The solution(s) must have been encrypted with secure access and QoS enabled.

WWT Wireless Overview

WWT has more than a decade of experience providing wireless systems to customers around the world. WWT has a dedicated Wireless Mobility Practice and our experienced mobility experts have extensive IT-relevant technical and project management acumen to assist our customers in developing a comprehensive wireless network solution. WWT delivers the advanced wireless technology and expertise, including Cisco Advanced Wireless LAN specialization and numerous wireless certified professionals, to ensure successful deployment throughout the State.

WWT Alaska Wireless Experience

For the **Anchorage School District (ASD),** WWT successfully designed and deployed a new Cisco network infrastructure for 108 schools, including routers, switches, wireless access points and controllers. WWT performed an end-to-end solution, providing complete system design, assessment of locations (including wireless site survey), core and WAN upgrades, remediation of cabling, network upgrades and installation of 2,050 Access Points with Quality of Service. WWT also provided Cisco Network Management and Access Control technology.

For **DOA-ETS**, WWT is currently engaged in a project to provide senior level expertise and professional services to deploy 10 Wireless LAN Controllers (WLC). Primary and secondary WLCs were configured and installed in the Atwood building in Anchorage, the State Office building in Juneau, the Juneau Datacenter, and the Anchorage Datacenter. Additionally, a WLC was deployed in the Anchorage and Juneau Wireless DMZs to provide secure guest wireless access. WWT configured more than 115 access points as part of this deployment.

Additionally, WWT designed and implemented the Cisco Identity Services Engine (ISE) solution as the security architecture to control access to the wireless network and provide guest services.

Other Notable WWT Wireless Customers

- Medical Education Training Center (METC)
- Springfield MO Police Department
- Webster University
- Mercy Health
- Kaiser Permanente Health
- Rockwood School District
- Phoenix Elementary School District
- State of Missouri
- Lindenwood University
- Nestle Purina
- Federal Emergency Management Agency

- Dignity Health
- Indiana Air National Guard (ANG)
- Department of Veterans Affairs (VA)
(FEMA)
- Medical Center of Southeastern Oklahoma

2) Have designed and implemented an Internet Protocol Telephony (IPT) solution comprised of Cisco Systems hardware/software that includes Cisco Call Manager servers for call control, Cisco Unity servers for voicemail, Cisco IPCC-X servers for Automatic Call Distribution (call centers), Cisco VoIP phone sets, SRST remote survivability, environmental controls and appropriate termination and integration of analog lines for various equipment at customer sites (i.e. faxes, modems, alarms, paging, etc.).

- ***Your project(s) must have included a minimum of 1,000 phone sets in at least 15 different physical facilities, in more than two cities, tied together using WAN links.***

WWT IPT Overview

As a Masters in Unified Communications, WWT has designed and deployed numerous Cisco Unified Communications VoIP solutions on intelligent networks. We have designed specialized voice solutions for the U.S. military to be used in war zones, Fortune 500 companies with offices throughout the world, state and local government agencies, higher education and K-12 school districts and health care organizations around the country.

WWT Alaska IPT Experience

For the **State of Alaska (SOA)**, WWT delivered a scalable Cisco IP telephony core that can support more than 22,000 IP phones. WWT completely converted 14,000 of the State's existing devices for voicemail, call control, call handling, Automatic Call Distribution (ACD), audio and video conferencing, E911 and Integrated Voice Response (IVR) integration in Anchorage, Juneau and Fairbanks to this new IP telephony core.

WWT also provided extensive facility remediation as part of this project, including cabling, rack build-out, HVAC, power and UPS. Each site needed to be remediated before the network and telephony upgrades could occur and parallel teams of subcontractors in Juneau, Anchorage and Fairbanks worked hard not to negatively affect the overall project completion date.

For the **University of Alaska, Anchorage (UAA)**, WWT was engaged to provide a multi-campus IPT solution. For this effort, WWT assembled a project team that incorporated program management resources, network and IP Telephony engineering resources, Call Center engineering resources, cabling contractors, UPS specialists, UAA's telephone company (ACS) and more. WWT provided pre-sales support, program management, a project launch workshop, as well as departmental interviews across the University's system. The work performed consisted of providing detailed network design, IP Telephony design, product procurement, product staging, configuration, implementation services and Cisco Certified Training.

Overall, WWT installed Cisco Core Switches, Distribution Switches, IP Telephony, Unified Messaging, Call Center, and Quality of Service with over 3,000 IP Handsets and integrated over 3,000 analog devices into the new system. The system includes over 30 facilities spanned across six cities connected across South central Alaska by WAN links.

UAA also contracted with WWT to design, procure and implement an Emergency Notification solution based on Cisco Emergency Responder and included Singlewire Software (IP based paging), Atlas Sound Zone Controllers (integration with analog paging system), and SchoolMessenger (message broadcasting). UAA now has a state of the art Emergency Notification System that is run by the UAA Campus Police Department and can very quickly notify virtually everyone on campus to provide Emergency information and instructions. This makes the UAA campus a safer learning environment and keeps UAA in compliance with federal Emergency Notification mandates.

With robust IP Telephony, Call Center, Unified Messaging and Emergency Notification System in place, WWT was contracted to extend UC services to their Community Campuses located in Kenai, Homer, Kodiak and Valdez. All of the Community Campus buildings needed site remediation to ensure the buildings could support the new technology. UAA contracted with WWT to perform complete site assessments for all facilities, provide upgrades of horizontal cabling, backbone fiber, electrical upgrades, HVAC upgrades and UPS upgrades to conform to the defined specifications implemented at the Anchorage campus.

UAA also contracted with WWT to implement a complete LAN and WAN network refresh for the community campuses, design and implement QOS across the new DS3 WAN infrastructure, design and extend the main campus IP Telephony system to the remote sites, deploy new Cisco voice gateway routers at the remote campuses so that Cisco SRST would function properly in the event of a WAN outage, cutover the campuses to the new network and then train the users and local IT staffs at the Community Campuses. Finally, UAA contracted with WWT to provide toll bypass long distance calling between UAA and all the community campuses to the main UAF campus in Fairbanks. UAA was very impressed with the work performed by WWT and sent a letter of recommendation which has been provided as ***Attachment 1***.

Additional WWT IPT Customers

- State of Missouri (SOM)
- US Bureau of Land Management
- Clorox
- Illinois Army National Guard
- Enstar Energy
- JP Morgan Chase
- Emerson Electric
- MO Dept. of Transportation
- Smithsonian
- Kaiser Permanente Health
- Wells Fargo
- Scripps Networks

3) Have designed and implemented P25 Long-Term Evolution (LTE) or other interoperable "radio" solutions.

WWT Radio Technologies Overview

WWT has a great deal of experience performing analysis, assessment, planning, design, implementation, documentation, project management, and support of Land Mobile Radio solutions with Cisco IPICS for Interoperability and Collaboration, providing the ability to integrate the Cisco data and voice networks to interoperate with Land Mobile Radio networks. WWT also has the same experience for Cisco AVVID (Architecture for Voice, Video and Integrated Data) solutions.

As a Master Certified Cisco Unified Communications partner, services will be provided to support technologies such as:

- Dial-tone (CUCM)
- Voicemail (Unity)
- Contact Center ACD and IVR (CCX)
- Presence (CUP)
- Emergency Responder (CER)
- Digital and Analog gateways (ATA, VG, and ISR),Session Initiation Protocol (SIP), and Cisco Unified Border Element (CUBE),
- IP Interoperability and Collaboration System (IPICS)
- Wired (7900), wireless, and soft client handsets
- Cisco Authorized Training
- Faxing Solutions
- Paging Solutions
- Call Recording Solutions
- Auto Attendant Solutions
- Emergency Notification Solutions
- Land Mobile Radio

WWT has partnered with Peak Signals (Peak) for this response. Peak has been actively involved with the continued development and maintenance of the State of Alaska Telecommunications System (SATS) since the company's inception. Over the years, Peak has worked at the majority of the more than 150 microwave sites that comprise the network. Peak specializes in planning, constructing and troubleshooting VHF / UHF radio systems and multi-hop microwave radio backhaul sites. Peak maintains a broad range of expertise from engineering, tower work, civil construction, grounding, microwave, two-way radio, power systems, circuit analysis and troubleshooting.

WWT Alaska Radio Technologies Experience

The staff at WWT's partner in this response, Peak Signals, has been directly involved in the initial development and deployment of the **Alaska Land Mobile Radio System (ALMR)**. The ALMR network is a digitally trunked interoperable P25 public safety radio system. Involvement included all aspects from the input on the original design to factory acceptance testing on over two-thirds of the total Motorola equipment purchased for this system.

Peak Signals is a qualified subcontractor for Motorola and is called upon periodically to assist in both State and Federal radio projects. They have worked directly for Motorola in several mountain top site development projects that necessitate heavy-lift helicopter efforts.

Peak's Engineers and Technicians have direct experience programming Motorola handheld and mobile radios. They have also installed Quantar repeaters and frequency combiners. With an extensive inventory of RF test equipment, Peak is able to troubleshoot common radio issues such as intermodulation and coverage problems. Both the Fairbanks and Juneau facilities have high-bay shops allowing them to perform vehicle installations for mobile radios.

WWT National Radio Technologies Experience

For the **City of San Marcos, CA**, WWT engineered and deployed Cisco IPICS and partnered with BIG Wireless to provide wireless coverage and four mobile access points (which extend wireless coverage beyond the command center) for the City's Mobile Emergency Operations Command (MEOC). The City of San Marcos' goal was to improve its command, control and communications capabilities for large-scale emergency incidents by adding the MEOC to its fleet of emergency vehicles.

The solution integrates with the City's existing Cisco Unified Communications environment and supports the Cisco IPICS software installed on a Cisco MCS7825 server, IPICS Policy Manager, 5 Dial Ports, 12 channel/radio ports, 50 Virtual Talk Group Ports, 20 Push to Talk Management (PMC) soft clients and 30 IP Phone clients. The solution also includes two Cisco 2811 Land Mobile Radio gateways running the IPICS router media service and includes two-port T1 module, three two-port E&M modules and two PVDM2-64 DSP modules.

The Cisco IPICS portfolio of products and applications provided cost-effective and comprehensive communications interoperability between push-to-talk (PTT) radio systems and devices such as mobile phones, IP phones, public switched telephone network (PSTN) phones and PC clients. Based on proven IP standards, Cisco IPICS takes advantage of ubiquitous IP networks to extend the reach of traditional communications networks and also to provide notification using email, pager notification, and Short Message Service (SMS). Using Cisco IPICS, the City of San Marcos was able to intelligently apply resources to streamline operations and rapidly respond to routine events as well as emergencies.

Pacific Gas and Electric (PG&E) selected WWT to provide a scalable console platform solution that combined telephone and radio functions into an ultra-reliable and user-friendly device at the workstation. The selected platform was to address the following business and technology drivers:

- Improve Control Center telephony (VoIP) and radio (RoIP) reliability.
- Develop a sound Disaster Recovery (DR) methodology.
- Develop a sound replacement strategy for TDM product obsolescence.
- Consolidation of the customer's Gas and Electric Operation Centers.
- Add features and functionality to improve the user experience.
- Increase the capacity of the customer's console systems.
- Remediate gaps in existing VoIP-RoIP Console systems.

The design was based on Cisco IP Interoperability and Collaboration System (Cisco IPICS) and IP Trade Turrets systems. The integration with existing production TAIT radio systems includes two IPICS Servers and Policy Engines in a High Availability (HA) pair, eight HA pairs of Cisco Unified Media Service (UMS) systems, two Cisco Inter-RF Subsystem Interface (ISSI) Gateways, Cisco Land Mobile Radio (LMR) Gateways with the customer's existing 2921 Routers in SFIOC and FFIOC, and IPICS IP Phone Clients. IP Trade Turrets were the console of choice for this project. There was one HA pair of IP Trade Turret Support Servers (TSS) and two IP Trade Turret Proxy to Open Line Dealing Servers (TPO) in each of the two Data Centers.

Additional WWT Radio Interoperability Customers

- US Air Force – Davis-Monthan AFB
- US Air Force – Dyess AFB
- US Air Force – Offutt AFB
- US Army – Camp Zama, Japan
- US Army – 35th Signal Brigade
- US Army – 1st Calvary Division
- US Army – Fort Gordon 551st Div.
- State of Missouri
- Fort Hood – TX
- US Army – Fort Hood
- US Special Operations Command
- Pendergast School District – AZ
- Madison County IL Sheriff's Office
- Sikeston MO Dept. of Public Safety

4) Have designed and implemented multiple data centers at all tier institute description levels (i.e. 1-4). Data Center defined under: http://en.wikipedia.org/wiki/Data_center

WWT Data Center Overview

WWT has a long track record of successfully planning, designing and implementing complex voice, data and infrastructure projects. For more than 22 years, WWT has met the technology integration needs of multinational corporations requiring global networks on a large scale, smaller private companies looking for a competitive edge, federal agencies, state and local governments, telecom service providers and educators. WWT works with companies across multiple industries and we have assisted with datacenter strategy and next-gen infrastructure implementation for clients throughout the US.

WWT Alaska Data Center Experience

In 2012 the **Anchorage School District (ASD)** embarked on an ambitious project to move their main IT Data Center from its current location, where it had stood for 20 years, to an unused elementary school located on Joint Base Elmendorf Richardson (JBER). The project was daunting and immense, not only did the district need to plan, design, install and migrate literally hundreds of systems, storage and network equipment; they needed to do it flawlessly over Christmas Break since that was the only downtime window that would allow for such a large scale move. They needed to get it right the first time, as there would be no second chances.

ASD went looking for a competent and trusted partner that could provide a Turn Key solution that required expertise in many different IT disciplines; including data center facilities, servers, storage, virtualization, networking and project management. After an extensive RFP process the School District chose WWT. WWT was the only IT organization that could provide the necessary certified resources for the required disciplines. Not only did WWT have the skills, they also had the trust of the ASD earned over years of doing projects together where WWT had proved itself to be a competent and trustworthy partner who had spent the time to understand ASD's processes and environment.

This project was resounding success and the ASD's new data center came on line as planned before ASD students and staff came back for the second semester of the school year. The ASD was impressed enough with WWT's work that the CIO wrote a letter thanking WWT management for hiring and supporting their Alaskan team. Please refer to ***Attachment 2*** for a copy of this letter.

WWT National Data Center Experience

WWT was selected by **Emerson Electric** to deliver a new state of the art Global Data Center facility at their headquarters in St. Louis, MO. In addition to migrating an existing legacy data center, the new datacenter required all new core, aggregate and access layer hardware, which is composed of Cisco Nexus 7000 and Catalyst 4900 switches. Additional features include Cisco ACE load balancers and ASA firewalls at the services level, and GSS for global failover and load balancing.

Additional WWT Data Center Customers

- Medical Education Training Campus (METC)
- Halliburton
- University of Arizona
- Defense Information Systems Agency (DISA)
- Pearson
- USDA

- Exelon
- Southern California Edison
- Mercy (Sisters of Mercy Health System)
- State of Arizona Dept. of Admin.
- State of Alaska (Juneau Data Center)
- State of Colorado
- State of Missouri Office of Admin.
- Lockheed Martin
- Sprint (Data Center move)
- Dignity Health (Catholic Healthcare West)
- Defense Info. Systems Agency (DISA)
- Boeing
- SAVVIS

5) Have designed and implemented secure Network solutions that included the deployment of several Cisco advanced security technologies (i.e. VPN, Firewalls, DMZ tools, ISE, IDS, etc.) scaled to support 20,000 concurrent users.

WWT Secure Network Overview

WWT has designed and deployed numerous Security and Route/Switch Networks from many of the industry's leading manufactures. WWT's experience in planning, designing and deploying networks of all sizes revolves around our partnership with Cisco, but extends to a range of technologies and manufacturers across LAN, WAN and Wireless topologies. We have designed specialized secure network solutions with Firewalls, DMZs, VPN, IDS, and ISE for Fortune 500 companies with offices throughout the world, state and local government agencies, higher education and K-12 school districts and health care organizations around the country.

WWT Alaska Secure Network Experience

From 2006 – 2009 WWT completed phases for a Network and Security project at the **State of Alaska (SOA).** The project was broken down into several different major categories, to include Network Infrastructure "Core, Distribution and Access Router" Replacement, Zero Day Threat Prevention Solutions, External and Internal Network and Services Separation (DMZ), Logging, Reporting, and Monitoring, the creation of Security Operation Center Services and Policy Development.

WWT National Secure Network Experience

WWT designed and deployed a fully distributed Cisco Identity Services Engine (ISE) infrastructure for **the Alabama National Guard (ANG)**. ANG maintains 141 armories in 129 communities throughout the State of Alabama. WWT installed ISE for a wired and wireless and VPN use case. WWT provided a distributed ISE infrastructure that consisted of two Policy Admin Nodes, two Monitoring Nodes, and a cluster of Policy Service nodes licensed for 5,000 endpoints. The deployment included Active Directory integration, as well as compatibility with Authentication Cards. WWT configured ISE to work with Cisco 3560, 3750, 4500 and 6500 Catalyst series switches as well as Cisco 5508 wireless LAN controllers and Cisco ASA 5500 series firewalls. ISE was configured to handle profiling, guest access and posture assessments utilizing both Basic and Advanced licensing features.

Per Security Infrastructure requirements and policy, the **United States Tax Court** acquired the expertise of WWT in order to deploy Cisco Adaptive Security Appliance (ASA), IPS (Intrusion Prevention System) as well as IronPort Web Security Appliances. This solution is part of U.S. Tax Court's layered approach to security and will be initially rolled out to their VoIP infrastructure. By implementing security policies for all devices seeking network access from the Internet, U.S. Tax Court will create an environment that limits potential damage from emerging security threats and risks. Cisco ASA's, IPS, and IronPort gives the U.S. Tax Court a powerful, layered methodology for preventing unauthorized access and improving network resiliency. Two ASA 5500 series, one IPS 4260 Appliance as well as an IronPort WSA M160 appliance was deployed for this purpose.

Additional WWT Secure Network Customers

- Alyeska Pipeline
- State of Alaska
- State of Hawaii, Department of Education (HIDOE)
- University of Hawaii
- Lindenwood University
- Missouri Army National Guard
- Army Corp of Engineers
- Raytheon
- Dignity Health (formerly known as *Catholic Healthcare West*)
- Express Scripts
- Pacific Gas & Electric
- Exelon Corporation
- Franklin Templeton
- eBay
- Lowes
- The Coca-Cola Company
- Panera Bread
- US Airways
- SFO Airport
- Clorox
- Quintiles, Inc.
- Monsanto

6) Have designed and implemented security systems for data centers, DMZ's, facilities, office buildings, etc.

WWT Capabilities Overview

WWT's physical security solutions enable customers to use their IP network as an open platform to build collaborative and integrated physical security systems while preserving your existing investments in analog-based technology. Our solutions provide broad network-centric capabilities in video surveillance, IP cameras, electronic access control, and groundbreaking technology that converges voice, data, and physical security in one modular appliance. WWT helps our customers enhance safety and security, improve situational awareness, achieve interoperable communications, and protect your community and IT investments.

WWT Alaska Experience

From 2006 – 2008 WWT deployed multiple Millennium physical access control systems for the **State of Alaska (SOA)** within Anchorage and Juneau in support of the communication closet upgrades during the telephone replacement project. Noteworthy deployments include a complete 12 floor building installation at the Frontier building in Anchorage, several closet reconfigurations and upgrades at the State of Alaska Building in Juneau, and numerous small systems at locations around Juneau.

WWT National Experience

WWT deployed a Cisco IP Video surveillance install at the student dorms of **Mineral Area College (MAC)**. MAC had issues with students breaking into the residence halls and weapons on campus, so WWT partnered with Watcher to perform the installation services of 18 cameras and two buildings. WWT provided the sales, pre-sales engineering and project management support, along with the Cisco hardware.

Similarly, WWT provided Video Surveillance System setup and configuration at **Lindenwood University's,** LU Commons in St. Charles, MO for 158 cameras. WWT deployed a Cisco solution which provided the latest in IP Video Surveillance technology in a platform solution optimized for applications to view, store, and manage real-time and recorded video in a networked environment. The system used an open suite of URL-based programmatic interfaces to communicate with applications. The system provided a highly scalable and reliable platform to enable customized, network-based surveillance applications.

The system allowed for simultaneous viewing for multiple users, each configured to have their own view and permissions based on their logon credentials. The security office was given the capability to monitor all cameras, while other users had limited access. These levels of viewing were accomplished using the Video Surveillance Operations Manager.

Additional WWT Customer Deployments

- Missouri Department of Transportation
- New Haven Unified School District
- State of Hawaii, Department of Education, Hawaii Public Schools
- University of California, Santa Cruz
- Maricopa Community Colleges - Chandler Gilbert, Gateway, Paradise Valley
- Special Operations Command
- Kingman Unified School District
- Mesa Police Department
- Phoenix Police Department
- Superior Court of Arizona
- 35th Signal Brigade at Ft. Bragg
- Offutt Air Force Base
- Davis-Monthan Air Force Base

7) Have designed and implemented a Storage Area Network (SAN) or Network Attached Storage (NAS) storage solution that is at least 2TB in size that serves multiple servers in multiple locations.

WWT Capabilities Overview

The data center experts at WWT understand that each business has unique needs, and that's why we use proven methods to plan, design, implement and optimize data center environments. With this solution-based approach, our certified engineers provide end-to-end data center solutions, leveraging the best-of-breed technology based on specific business needs and data center infrastructure. WWT has extensive experience implementing strategies for our customers to better manage information growth, including reducing the size of their data stores and eliminating duplicate data, while making sure all information remains readily available to users. WWT's storage experts address the most common pain points for today's overtaxed storage environments by strategically partnering with OEMs such as NetApp, EMC, Hitachi, Dell, HP and more.

WWT Alaska Experience

For the **Anchorage School District (ASD),** WWT planned, designed, and installed a new NetApp FAS3240AE storage cluster in ASD's new datacenter. This storage area network (SAN) was a 14.4 TB solution. This storage solution was designed to support FC, iSCSI, and NFS storage connectivity. The installation integrated the new NetApp storage system with the NetApp storage system at the existing datacenter and integrated them in a redundant fashion across the two locations.

WWT National Experience

WWT provided installation of one FAS3240 clustered storage system with sixteen (16) disk enclosures (NetApp) at **Mercy Health**. WWT worked with the customer to determine the correct location of the system, as they had several data centers in the MO area, timing and configuration needs. Installations were done properly and on the customer timeline.

Additional WWT Customer Deployments

- USDA
- DOJ
- NASA
- Smithsonian
- Broward Health
- Magellan
- Boeing
- AT&T Mobility
- Drive Time
- Global Cash
- Lockheed Martin
- Sisters of Mercy
- Park National
- BNYMellon
- Maritz
- Savvis
- Army Corps of Engineers

8) Be a Cisco Gold Partner. Proof of Cisco Gold Partnership is required.

WWT has been a Cisco partner since 1994 and achieved Gold Partner status in 2002, please see ***Attachment 3*** for documentation of our Cisco Gold Partnership.

Personnel Experience and Qualifications (Section 7.03)

Organizational Charts

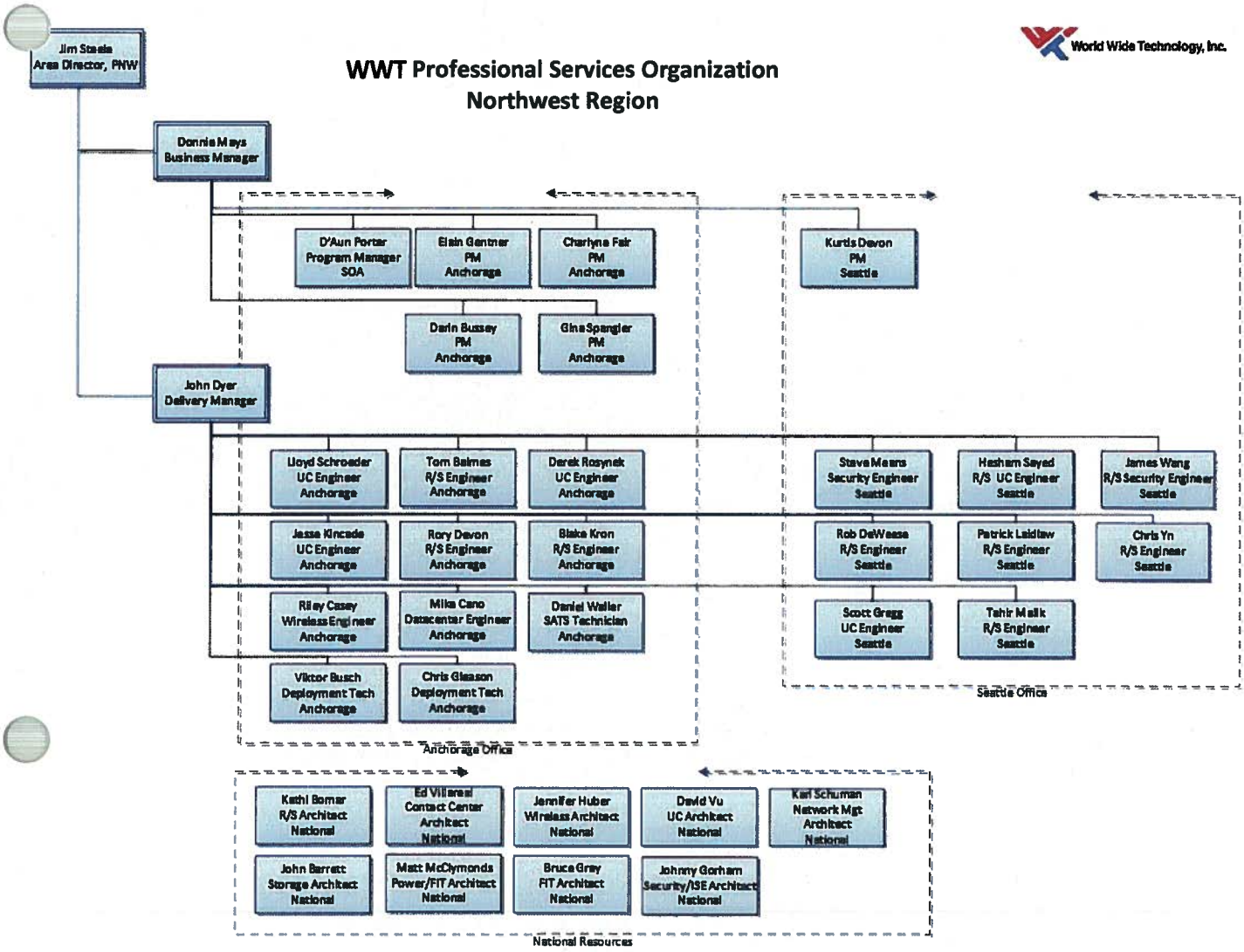
At a minimum, Offerors must provide an organizational chart specific to the key personnel assigned to accomplish the work called for in this RFP; illustrate the lines of authority; designate the individual responsible and accountable for the completion of each component and deliverable of the RFP. The State prefers Project Managers with detailed, working knowledge of Project Management language and processes. Evidence of Project Management certification is required.

WWT's Alaska Technical team, which is based in Anchorage, includes over 20 Cisco certified engineers, including CCNA, CCNP and CCIE for Voice. This team has vast experience in deploying and supporting IT technical solutions throughout Alaska. Many of these resources have been involved in supporting the SOA's network since the initial Telephone replacement that started in 2006.

Nationally, WWT has hundreds of advanced level resources, with capabilities spanning a broad range of technologies, who are available to serve Alaska when needed.

WWT has provided two organizational charts specific to the personnel assigned all potential work called out in this RFP, which for WWT includes the Professional Services and Sales organizations in the Northwest region.

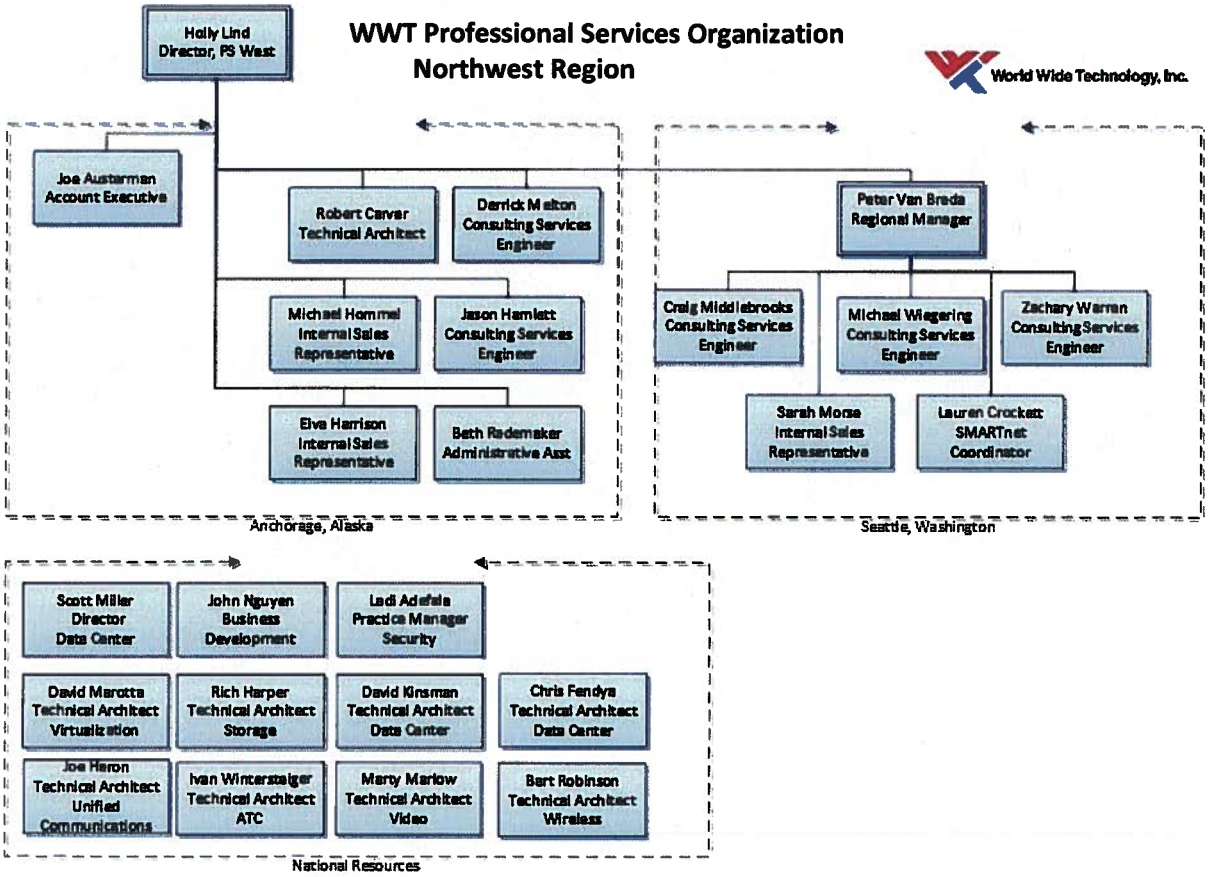
In addition to the organizational charts provided below, please see our response under *Offeror's Understand and Methodologies, Project Management and Quality Assurance* on Page 40 for more information regarding specific WWT individuals and their roles on this contract.



WWT Alaska Project Management Team

Name	PMP Certification Number	PM Years of Experience
Willie Rademaker	215562	16 years
Charlyne Fair	46393	16 years
D'Aun Porter	252655	10 years
Gina spangler	1452376	10 years
Andre Sergoyan	1515199	10 years
Elain Gentner	1261509	6 years
Kurtis Devon	1433181	4 years

The Project Management Institute (PMI) certified Project Management Professional (PMP) credential is the most important industry-recognized certification for project managers. Globally recognized and demanded, the PMP demonstrates that you have the experience, education and competency to lead and direct projects. WWT requires all of our Project Managers to hold and maintain this certification.



<u>Category Positions – Definitions and Minimum Qualifications (Section 7.03.01)</u>

Hourly rates must be provided for the Entry, Associate, Professional, and Expert level staff. The number of years associated with any experience level will be part of the overall resume evaluation. Each category will require a minimum level of experience and certification. Offeror's must be able to provide an hourly breakdown cost for each position.

Please refer to the ***Cost Proposal*** for WWT's hourly rates for the experience level roles

Special Experience and Certification Requirements

Contractor shall hold the following specializations and Authorized Technology Provider certifications:

An Offeror's failure to meet these minimum prior experience requirements will cause the proposal to be considered non-responsive and their proposal will be rejected.
WWT complies with these requirements and has provided evidence of such as ***Attachment 4.***

Technical Proposal (Section 7.02)

Table of Contents **Page**

Offeror's Understanding and Methodologies (Section 7.02.01) **18**
A) Offeror and Subcontractor information by Category 18
B) Offeror's Statement of RFP Understanding and Intent 38
C) Offeror's Project Management and Quality Assurance Methodology 40
D) Offeror's Work Order Cost Estimate Methodology 51

Offeror's Qualifications for Categories and Services (Section 7.02.02) **53**
Category 1: Telecommunications Consultant Services 54
Category 2: Telecommunications Planning, Analysis & Design 60
Category 3: Telephone Communications 65
Category 4: Radio Communications 72
Category 5: Data Communications 80
Category 6: Data Center Solutions 89
Category 7: Local Area Network 95

Offeror's Understanding and Methodologies (Section 7.02.01)

A) Offeror and Subcontractor information by Category

Include the Offeror's primary business, years of operation, number of employees, ownership (public company, partnership, subsidiary, etc.), years providing IT consulting services specific to the Category, description of service(s) provided, and the year(s) in which the service(s) was provided. This information must also be provided for any proposed joint venture partner or subcontractor if/when applicable.

WWT Summary

Primary Business	WWT is a leading Systems Integrator providing technology products, services, and supply chain solutions to customers around the globe. Our technology focus areas include Data Center, Collaboration, Networking, Security and Supply Chain.
Years of Operation	23 years
Number of Employees	2,300
Ownership	Privately Held

For the remainder of our response to this section, WWT has endeavored to provide information requested in a consolidated fashion while also providing sufficient detail to demonstrate our capabilities and those of our subcontractors for each Category.

The table below includes a list of all companies, including WWT and our subcontractors included in our response. Where marked 'X' indicates the company has proven experience in that Category and Page # indicates where the corresponding Company information has been provided within this section.

Company Name	**Category**							**Page #**
	1	**2**	**3**	**4**	**5**	**6**	**7**	
World Wide Technology (WWT)	X	X	X	X	X	X	X	19
Subcontractors								
GCI Communication Corp.	X	X	X	X	X	X	X	27
B2 Networks	X	X			X	X	X	31
Cisco Advanced Services (Cisco AS)	X		X		X			32
Peak Signal		X		X				33
Telecom Concepts LLC	X						X	34
Aqueon	X							35
Hot Wire Communications LLC							X	35
Denali Mechanical, Inc.							X	36
Alaska Commercial Contractors, Inc.							X	36
Eaton Corporation							X	37
Behrends Mechanical, Inc.							X	37
IPVision, Inc.							X	37

World Wide Technology, Inc. (WWT)

Category 1: Telecommunications Consultant Services	
Years Providing IT Consulting Services	10
Years in Which Services Provided	2003 - 2013

Description of Service(s) Provided:
System analysis, assessment, cost analysis, planning, design, recommendation, implementation, documentation, project management, and support of comprehensive enterprise telecommunications systems.

Development of policy and procedure by which these systems are managed and maintained, with regular system review and recommendations.

Integration Technology Center to aid in business continuity by providing full Supply Chain and Logistics services (detailed in additional information).

Additional Information:
*(note: A more comprehensive version of this section is included as **Attachment 5**)*
WWT's Collaboration practice experts know that "Unified Communications" and "Collaboration" have different meanings to different individuals and organizations. We also know the true benefits of how Collaboration architecture can support core business needs.

WWT leverages our professional services expertise to help our customers plan, design, implement, and operate some of the most complex Cisco UC and video networks in the country. These various components integrate with systems such as voicemail, paging, faxing, presence, IM, WebEx, contact center, two-way radio systems, etc. to make a collaborative environment. Our certified engineers provide free and up-front services to help organizations determine their strategy. WWT provides a pre-sales technical expert up-front for the consulting portion of the sales cycle to ensure that proper roadmap discussions, planning and design has taken place. These upfront pre-sales services include:

- Solution Briefings
- Discovery Sessions
- Whiteboard technical session
- Technical workshops
- Business case workshops
- Case studies
- Vendor agnostic comparisons
- Technical demos and pilots onsite with deployable demo kits
- EBC (Executive Briefing Center) demos

The Integration Technology Center (ITC) :
Located near WWT's headquarters in St. Louis, MO, the ITC provides a complete array of configuration, integration and staging services. This facility can perform equipment aggregation and staging, hardware configuration, software imaging, end-user profile settings, data migration, rack configuration, asset tagging and auditing. These services, backed by our quality processes and supported by online project management tools, are aligned with leading IT OEMs, including Cisco, HP, Dell, Oracle, NetApp, EMC, VMware, Citrix and more. Our sophisticated 22,500-square-foot ITC can simultaneously accommodate configuration and integration of servers, laptops, desktops, storage systems and network components with a total capacity to configure more than 30,000 systems per week.

The most compelling case for building and maintaining a state-of-the-art integration facility is the range of benefits it offers to WWT customers. Configuration and integration on site can be costly and time consuming. By completing much of the preparation in the highly controlled ITC environment before the equipment is shipped to the customer location, WWT is able to reduce on-site Professional Services time and cost. After each device is configured according to the exact customer specifications, site-specific equipment is integrated, re-tested and palletized ready for shipment to the correct location. Once it arrives, WWT Professional Services field staff will install the equipment and complete the configuration.

ITC Capabilities

- OEM Product Provisioning
- Receiving and Shipment Preparation
- Asset Tagging
- Product Storage
- Kitting
- Reverse Logistics
- Trade-Bank
- Imaging Services
- System Inserts
- Rack and Stack Integration
- Remote Configuration

WWT's Logistics and Distribution Center:
In support of the ITC, WWT is able to provide ISO 9000:2008 certified logistics and warehousing capabilities to SOA at our 210,000-square-foot warehouse located in Lakeview, Illinois. WWT manages 3,400 rack pallet positions, 1,900 floor pallets and efficient cross-docking using a highly automated warehouse management system. WWT facilities across North America are linked to a centralized Oracle inventory and order management application hosted in our secure data center in St. Louis. WWT materials management teams perform a variety of services including equipment aggregation and staging, hardware configuration, software imaging, asset tagging and auditing. Our value-added services dramatically reduce the complexity and inefficiency often associated with supply chain management.

In combination, WWT's industry-leading supply chain management facilities and ultra-modern ITC provide a broad range of benefits to SOA. SOA will not need to allocate large amounts of storage space and won't have to re-ship to facilities from a central location. Equipment will arrive at each site configured and tested, ready for the local Professional Services team to complete the installation. WWT's commitment to 100% satisfaction, backed by state-of-the-art facilities and highly skilled technical professionals, is your guarantee that equipment will arrive at the right place, at the right time, ready to install, and in the most cost-efficient way possible.

Advanced Technology Center:
WWT's Advanced Technology Center (ATC) provides an ecosystem for customers and partners to stand up small-scale versions of prospective solutions, review product demonstrations, evaluate reference architectures and participate in hands-on training classes. The ATC helps commercial enterprises and government agencies evaluate their current IT challenges and explore technology solutions to enable future success. WWT can arrange remote demonstrations or face-to-face meetings with certified experts able to recommend the best solutions to help reduce costs while increasing productivity and optimizing current assets.

WWT currently has more than $25 million worth of leading-edge, hands-on equipment available in the ATC, deployed exclusively to benefit our customers. WWT experts will collaborate with your team to solve challenges around Storage, Virtualization, Cloud Computing and all goals revolving around the National Data Center Program.

Category 2: Telecommunications Planning, Analysis & Design	
Years Providing IT Consulting Services	10
Years in Which Services Provided	2003 - 2013

Description of Service(s) Provided:
Analysis, assessment, planning, design, recommendation, implementation, documentation, project management, and support of LAN (Local Area), MAN (Metro Area), and WAN (Wide Area) Networks providing voice, data, and video communications via satellite, radio, microwave, cable, wireless, and other communication transport types.

Services also include ongoing tracking of support and maintenance contracts with regular recommendations on new elements to help eliminate obsolete equipment, reduce cost, and provide greater efficiencies and economies of scale.

Category 3: Telephone Communications	
Years Providing IT Consulting Services	10
Years in Which Services Provided	2003 - 2013

Description of Service(s) Provided:
Analysis, assessment, planning, design, implementation, documentation, project management, and support of the Cisco AVVID (Architecture for Voice, Video and Integrated Data) solutions. As a Master Certified Cisco Unified Communications partner, services will be provided to support technologies such as:

- Dial-tone (CUCM)
- Voicemail (Unity)
- Contact Center ACD and IVR (CCX)
- Presence (CUP)
- Emergency Responder (CER)
- Digital and Analog gateways (ATA, VG, and ISR), Session Initiation Protocol (SIP), and Cisco Unified Border Element (CUBE)
- IP Interoperability and Collaboration System (IPICS)
- Wired (7900), wireless, and soft client handsets
- Cisco Authorized Training
- Faxing Solutions
- Paging Solutions
- Call Recording Solutions
- Auto Attendant Solutions
- Emergency Notification Solutions
- Land Mobile Radio

Category 4: Radio Communications	
Years Providing IT Consulting Services	7
Years in Which Services Provided	2006 - 2013

Description of Service(s) Provided:
Analysis, assessment, planning, design, implementation, documentation, project management, and support of Land Mobile Radio solutions with Cisco IPICS for Interoperability and Collaboration, providing the ability to integrate the Cisco data & voice networks to interoperate with Land Mobile Radio networks.

Additional Information:
Cisco IP Interoperability and Collaboration System (IPICS) – Cisco IP Interoperability and Collaboration System enables interoperability between disparate radio networks and traditional communications networks. By sending radio traffic over an IP network, Cisco IPICS cost-effectively enables public safety personnel to bridge and exchange information when they are using different radio systems. Cisco IPICS allows push-to-talk communications on radio handsets, networks, laptop & PC clients, telephones, and mobile phones, improving response times and resource collaboration.

Category 5: Data Communications	
Years Providing IT Consulting Services	14
Years in Which Services Provided	1999 - 2013

Description of Service(s) Provided:
Analysis, assessment, planning, design, implementation, documentation, project management, and support of the Enterprise level network.

- Expertise for the complete suite of Cisco network routing and switching devices for Layer 2, Layer 3, and beyond.
- Layer 2 switching, trunking, spanning tree, etc.
- Layer 3 Dynamic Routing Protocols (EIGRP, OSPF, BGP, MPLS, etc.),
- Layer 3 distribution (HSRP, VRRP, GLBP, etc.),
- Quality of Service mechanisms (Queuing, Shaping, Prioritization, Compression, Classification, etc.) for data, voice, and video networks utilizing the Cisco AVVID framework as the foundation.
- Network and System security with Cisco, RSA, and McAfee complete suite of solutions for physical, network, endpoint, and application security with comprehensive management platforms (Cisco ASA, IPS, IDS, ISE, IronPort, etc.) (McAfee Nitro, EPO, NIPS, Web Gateway, etc.)
- Secure Cisco Wireless Networks with Identity Services Engine (ISE) and Network Access Control (NAC) for Corporate & Guest Access and Bring Your Own Device (BYOD)
- Mobile Device Management (MDM)
- Integration and Interoperability with Land Mobile Radio
- Cisco Authorized Training

Additional Information:
WWT's experience in planning, designing and deploying networks of all sizes revolves around our partnership with Cisco, but extends to a range of technologies and manufacturers across LAN, WAN and Wireless topologies.

WWT has designed and deployed numerous Cisco Routing and Switching solutions on complicated, intelligent networks. We have designed specialized Routing and Switching solutions for the U.S. military to be used in war zones, Fortune 500 companies with offices throughout the world, state and local government agencies, higher education and K-12 school districts and health care organizations around the country.

WWT has designed and deployed numerous Security Solutions from many of the industry's leading manufactures. WWT has earned the Cisco Masters designation in Security. WWT combines elements from Cisco, McAfee, RSA, Symantec, LanCope, and many other manufactures to create comprehensive security solutions. These solutions protect and monitor the wired and wireless networks, restrict and control access, protect endpoints and applications, and provide management and reporting.

Secure Wireless Networks that support corporate and guest access and BYOD applications are top of mind for the majority of organizations today looking to expanding the traditional wired LAN/WAN network. With certifications in Cisco Advanced Wireless LAN and Outdoor Wireless MESH among others, we are able to offer an array of capabilities that span from technical product integration to onsite Cisco-certified training. WWT delivers the advanced wireless technology and expertise needed to expand and take on new initiatives.
WWT can help:

- **Improve Efficiency and Collaboration**: real-time access to applications, data and resources
- **Increase Visibility:** easily track valuable equipment and products on the wireless LAN
- **Maintain Security**: authentication, encryption, identity services, and wireless IPS
- **Get True End-to-End Support**: assessments, surveys, implementation, support, and training

WWT specializes in delivering Cisco's Identity Services Engine (ISE), and integrating it with profiling services to authorize users and determine their level of access to the network based on who, when, where, and with what they are attempting access. ISE directly integrates with an access control architecture that's part of SOA's overall security and infrastructure policy.

Cisco and WWT see the IP network as the platform for convergence for a complete line of physical security products. With IP Video Surveillance and Physical Access Control solutions, Cisco enables the IP network to bridge your security and access technologies into a single unified network.

A Key differentiator of the WWT approach is the utilization of our Integrated Technology Center (ITC) to perform initial DOA testing and configuration services. By having certain tasks completed in a controlled laboratory environment, the ITC achieves tremendous economies of scale, helping to reduce more costly on-site field engineering labor while assuring fully tested and configured products arrive on site.

Category 6: Data Center Solutions	
Years Providing IT Consulting Services	19
Years in Which Services Provided	1994 - 2013

Description of Service(s) Provided:
Analysis, assessment, planning, design, implementation, documentation, project management, and support of Datacenter solutions from Cisco, NetApp, EMC, VMware, Citrix, HP, and Dell. Integration between these OEMs to provide solutions for:

- Private Cloud (FlexPod & Vblock)
- Application and Desktop Virtualization
- Server Virtualization
- Application Security
- Secure remote access
- Unified Computing & Portability with Cisco UCS
- Secure Storage Area Networks
- Disaster Recovery with vaulting and mirroring and automated recovery

Additional Information:
WWT has certified engineers and delivery resources focused on virtualization, server, storage and networking. WWT is Cisco's largest data center partner, and a top-tier partner with EMC, NetApp, HP, VMware, Citrix, Oracle and Dell. WWT provides customers with an architecturally independent, multi-vendor approach to the selection and implementation of data center technologies.
WWT has been a leader in data center innovation, design and deployment for over 20 years.

Through our long-standing strategic partnerships with Cisco, HP, EMC, VMware, Citrix and NetApp, WWT is a best-in class provider of the most advanced multi-vendor data center solutions available today—including FlexPod, Vblock, BladeSystem Matrix, and WWT's proprietary FAST Mobile Data Center architecture. WWT's expertise in data center design is augmented by a Professional Services team certified to the highest IT industry levels and a Facilities Infrastructure Team (FIT) with the broad expertise to manage SOA's complex racking, cabling, UPS, HVAC, CRAC, In-row cooling and RAF needs.

WWT certified data center experts have the technical knowledge and deep expertise to help you transform your data center, empower enterprise-wide productivity, take on new challenges and protect critical assets with our proven methodologies, best practices and best-of-breed data center solutions and support. With WWT, it's easy to:

- Leverage Virtualization to enable cloud computing
- Provide enterprise datacenter services to departments and agencies
- Utilize Desktop and Application visualization to enable an extraordinary end-user experience
- Automate delivery of services to customers
- Create flexible and efficient storage infrastructure
- Expand operations and ensure availability
- Provide infrastructure and process to support disaster recovery

2012 Sales, Ranking and Status	OEM	OEM Recognition
• $2.4+ Billion • #1 U.S. (#2 Global) • Cisco Gold	CISCO	*Top U.S Partner* *#1 Data Center Partner* *1st Cloud Builder Partner*
• $400+ Million • Top 3 Partner • HP "Specialist" Partner	hp	*HP Cloud Center of Excellence* *Top CloudSystem Matrix Partner*
• $370+ Million • Top 3 Partner • EMC Signature Direct	EMC²	*National Partner of the Year 2012* *Top 3 Vblock Partner* *Fast Growing Partner of EMC*
• $125+ Million • Top 5 Partner • NetApp Star	NetApp	*Fastest Growing Star Partner in the history of NetApp* *Top 2 FlexPod Partner* *Fast 100 Partner*
• $45+ Million • Top 3 Partner • Citrix Gold	CITRIX	*Fastest Growing Partner (2012)* *Member Partner Technical Board*
• $30+ Million • #1 National Premier Partner • VMware Premier	vmware	*Partner of the Year (gov't)* *Partner Technical Board*

Solution Workshops

A WWT Workshop is an essential element in the planning phase of an IT initiative. The workshop is a detailed analysis of your infrastructure, business or mission needs, and current environment which provides a set of quantitative and qualitative recommendations designed to address your vision. The result of the WWT methodology is a functional, scalable environment that supports current key business drivers and future requirements. These workshops are offered to our customers at no additional cost.

WWT routinely provides workshops for our customers that cover the full range of technologies we provide and support. Provided below is a sample of some of the workshops WWT can offer SOA:

- Data Center Security
- Network Security
- Cloud Security
- Business Continuity
- Virtual Desktop Infrastructure (VDI) and Desktop Virtualization Feasibility Assessment
- Network Assessment
- Backup, Recovery, and Archive (BURA)
- Cloud Business Continuity and Disaster Recovery
- Cloud Enablement Workshop
- Hosting Tier-1 Applications in the Cloud
- Network Admission Control Readiness Assessment
- TelePresence Readiness Assessment
- Application Virtualization
- IT Service Management (ITSM)
- Information Lifecycle Management (ILM)

Category 7: Local Area Network

Years Providing IT Consulting Services	7
Years in Which Services Provided	2006 - 2013

Description of Service(s) Provided:

Analysis, assessment, planning, design, implementation, documentation, project management, and support of LAN, MAN, and WAN networks. Providing additionally services for Facilities Infrastructure to include:

- Internal building wiring and system remediation
- External building wiring and system remediation
- Electrical design and implementation for building power backup, distribution and UPS
- HVAC systems for datacenters and communications rooms
- Rack infrastructure to include ISO/Seismic solutions
- Datacenter and communications closet design and construction
- Mobile datacenters
- Fire alarm and suppression systems for datacenters and communications rooms
- IP Video Surveillance
- Physical access and management solutions

Additional Information:

The Facilities Infrastructure Team (FIT) is a practice within the WWT Professional Services group. FIT covers both strategic Commercial and Federal markets supporting the traditional IT environments, including Data Centers, telecom rooms, and all other supporting facility infrastructure requirements of space, power, cooling, cabling and safety.

The WWT FIT Team consists of in-house Subject Matter Experts (SME) covering all the major infrastructure components (Power, Space Cabling, HVAC, UPS, Safety, etc.) coupled with a complete partner network of construction professionals throughout the country. FIT provides the latest in technology solutions, code compliance and green initiates all measured against the industries' best practices and are members with all the governing associations defining the infrastructure baseline and industry standards (BICSI, ASIS, NFPA, ASHRAE, Cisco, NICET, PMI, USGBI, LEED, etc.). FIT is also partnered with solution architects, mechanical and electrical designers and installers, structural and sound engineers, civil engineering contractors, equipment suppliers, technology vendors, cable contractors and all major component suppliers.

FIT Methodology

WWT tailors its Facilities Site Assessment to the unique needs of each customer. A combination of interview techniques, site surveys, documentation review and technology are used to gain a clear picture of our customer's current infrastructure and facilities management. Using this knowledge, coupled with industry best practices and cutting-edge discovery tools, FIT experts can make specific recommendations to improve facilities efficiencies and create a holistic enterprise with properly aligned and configured power, communication, computing, security and control systems, including:

- Layer 1 infrastructure such as fiber and copper cabling, patch panel types, back bone and horizontal
- Cable types, termination quality and best practices review
- Available power, UPS and grounding, as well as any code compliance issues
- Available space, including room sizes, available rack space, shared space concerns, equipment storage, raised floor design, sprinkler systems, water systems, etc.
- Environmental systems (including HVAC), best practices regarding heat loads and cooling capacity, etc.
- Physical security, fire suppression, other building automation and additional infrastructure factors that may impact our customers' sites performance, efficiencies and sustainability.

Professional assessment of current data center infrastructure	Core expertise in understanding data center requirements and identifying potential problem areas related to installation techniques, cable, power, space, cooling and safety
Detailed infrastructure assessment report	Comprehensive overview of infrastructure "current state" and identification of gaps relative to industry standards and ability to support next-generation network requirements
Recommendations for improvement and implementation of best practices	Establishes physical infrastructure "best practices" throughout the data center; ensures consistency, performance, and interoperability across the entire physical infrastructure; improved efficiency and reliability
Provide migration strategies or upgrade plans for the data center cabling infrastructure	Offers a roadmap for seamless installation or upgrades of the physical layer infrastructure; minimizes downtime and the impact due to moves, adds, changes (MAC's); reduces implementation time and risk; assesses the effects of changes on the existing environment and architecture

WWT's physical security solutions enable customers to use their IP network as an open platform to build collaborative and integrated physical security systems while preserving their existing investments in analog-based technology. FIT solutions provide broad network-centric capabilities in video surveillance, IP cameras, electronic access control, and groundbreaking technology that converge voice, data, and physical security in one modular appliance. Turn to WWT's FIT team when your organization is ready to:

- Enhance Safety and Security: physical security experts to help prevent, deter, detect and respond to both network and physical security incidents.
- Improve Situational Awareness: network-based physical security solutions enable collaboration across multiple agencies, notifying different departments via various devices, all at the same time.
- Achieve Interoperable Communications: leverage IP-based communications systems that use your existing data network to provide new, advanced communication services, such as voice, video, and Web collaboration.

WWT answers the call for transportable enterprise computing with a customized mobile data center solution that frees organizations from the confines of brick-and-mortar structures. WWT's FAST Mobile Data Center solution is perfect for mobile cloud computing, expansion without the cost of new construction, rough-terrain or harsh environment deployments, scientific exploration, command and control centers, business continuity planning and more. The WWT FAST Mobile Data Center solution is also:

- Fully Customizable: we offer rack level and 10 through 53 foot ISO container solutions – and work with you to help you choose the right container size, custom solutions and number of racks required to maximize your budget while optimizing floor space, power and cooling.
- Complete: build complete existing data center space extensions and autonomous mobile data centers comprised of advanced compute, storage and network solutions with precision power, ambient-air or chilled-water cooling to ensure stand-alone efficiency. The FAST Mobile Data Center is a finished solution rather than bare floors and walls.
- Easy to Deploy: can be deployed quickly via truck, rail, air or sea. We pre-stage and fully test all components before deployment to ensure zero-downtime. Our shock mounts exceed MIL-STD-810G specifications for shock and vibrations to protect fragile IT equipment.
- Scalable: experts can fully evaluate anticipated bandwidth, computing resources and storage needs to ensure that your self-contained mobile data center has the capacity to meet current computing demands and can scale to meet long-term goals.

GCI

Category 1: Telecommunications Consultant Services	
Years Providing IT Consulting Services	21
Years in Which Services Provided	1992 - 2013

Description of Service(s) Provided:

GCI's Telecommunications Consultant Services are always performed by personnel with substantial recent technical experience in communications and electronics theory. We provide similar services for the State of Alaska's network/systems, as well as other Enterprise customers that are comparable.

- Telecommunications Development/Architecture/Systematization

- Telecommunications Business Consulting such as Supply Chain, Staging/Kitting, Asset Management, Logistics/Warehousing, Asset/Life Cycle Management, Equipment Pre-Configuration, Equipment Imaging, Asset Tagging, Burn-In, Remote Access, Reporting, Billing, etc.
- Cisco IP Telephony Services

Additional Information:

GCI has provided these services for multiple Oil and Gas companies, Financial Institutions, and the State of Alaska. The first outsource contract GCI was awarded was with BPXA in 1992, then National Bank of Alaska. We handled the telecom requirements of NBA's transition to Wells Fargo. We were also awarded the telecommunications outsource for First National Bank Alaska (FNBA) in 1999.

In 2003, GCI was awarded the State of Alaska Core Services contract. We:

- Man the SOA Service Center 24X7X365 for telecom,
- Maintain all Core IP Telephony services,
- Install and maintain the State's Videoconference Network,
- Provide local and long distance VTN and PSTN services,
- Provide Internet, LAN, MAN and WAN data services,
- Assist the SSO with security services,
- Provide the State's Anchorage Data Center facility,
- provide cable TV services,
- Provide project work on an as-needed basis,
- Provide consulting services on SATS, IPICS, WAN redundancy, and a myriad of other technologies.
- We still provide these telecommunications services for the above organizations.

GCI has also installed and maintained Cisco IP Telephony for such organizations as Alaska Pacific University, FNBA, Credit Union 1, Denali Alaskan FCU, and many organizations of all sizes.

Category 2: Telecommunications Planning, Analysis & Design

Years Providing IT Consulting Services	30
Years in Which Services Provided	30

Description of Service(s) Provided:

Services will be performed by GCI personnel with recent experience in advanced telecommunications technologies and in applying innovative approaches for adapting complex communications principles and/or techniques to the unique circumstances of the Alaskan environment.

- Cisco Technologies
- Motorola and Harris Technologies
- Alcatel Technologies
- Interoperability of TDM and WAN packet switching transport technologies

Additional Information:

GCI has extensive expertise regarding electromagnetic communications requirements and expert ability in (and experience in) recommending new methods or revising existing methods of communication to achieve greater economy, efficiency and to eliminate obsolescence. We have a reputation for top-notch expertise combined with practical experience in the field, and for acting as our customer's advocate.

Category 3: Telephone Communications	
Years Providing IT Consulting Services	11
Years in Which Services Provided	1 year - Communications Interoperability 6 years - Session Initiation Protocol (SIP) 2 years –SOA's CUBE routers
Description of Service(s) Provided: Develop, deploy and support Cisco's Call managers, Unity Voice Mail Servers, IP Contact Centers, ICD Servers, IP IVR Servers, Gateways, Cisco ATA devices and Soft, Wireless & 7900 series IP Phones.	
Additional Information: GCI has extensive experience in deploying large scale AVVID installations: We have deployed and/or maintain over 7,000 Cisco phones for ourselves and our enterprise customers. We know how to develop, deploy and support Cisco's Call managers, Unity Voice Mail Servers, IP Contact Centers, ICD Servers, IP IVR Servers, Gateways, Cisco ATA devices and Soft, Wireless and 7900 series IP Phones. We have proven successful design and deployment of Cisco's Survivable Remote Site Telephony (SRST) to provide VoIP fail-over services, especially important for government and financial institutions. Since this environment is exclusively Cisco's AVVID infrastructure, it is required that Cisco CCNP, CCIE, and other certifications be held by the organization supporting this infrastructure to meet manufacturer support requirements. These vendor certifications include but are not limited to Cisco Gold Certification, IP Telephony Services Certification & Cisco Advanced Technology Provider – IPCC Express Certification.	
Category 4: Radio Communications	
Years Providing IT Consulting Services	18
Years in Which Services Provided	21 years - Cisco, Motorola, Harris and Alcatel Technologies 10+ years - TIA 102-P25 and Trunked Mobile Systems 1 year - Interoperability tools for Cisco IPICS, p25, LTE 17 years- Broadcast Systems (purchased 3 cable companies in 1996)
Description of Service(s) Provided: Cisco, Motorola, Harris and Alcatel Technologies, TIA 102-P25 and Trunked Mobile Systems, Interoperability tools for Cisco IPICS, p25, LTE and Broadcast Systems	
Additional Information: We have worked very closely with ETS and are very familiar with the State of Alaska's use of the P25 standard for Trunked Land Mobile Radio Systems. GCI's Industrial Telecom Group has extensive experience providing wireless communications for the Oil and Gas industry. GCI has a wireless division and is the state's second largest wireless company. We have deployed, and are very familiar with LTE technology on our own wireless network. Services will be performed by personnel with recent experience in radio. These personnel continually prove themselves capable of performing activities of increasing complexity. GCI has been an outsourced engineering resource of Motorola's for many years. We are well trusted by the manufacturer and have a long history of support and project success.	

Category 5: Data Communications	
Years Providing IT Consulting Services	21
Years in Which Services Provided	21 years - Cisco Technologies 10+ years - Alaska Land Mobile Radio (ALMR) migration of circuit switched network to packet switched network 17 years - Public Broadband 17 years - Security Technologies: Physical, Network, Endpoint, Application, Management, Etc., especially as an ISP. 21 years - Router/Switch configuration/BGP
Description of Service(s) Provided: Cisco Technologies, Alaska Land Mobile Radio (ALMR) migration of circuit switched network to packet switched network, Public Broadband, Security Technologies: Physical, Network, Endpoint, Application, Management, Etc. and Router/Switch configuration/BGP	
Additional Information: Services will be performed by GCI personnel with extensive technical background, data communications experience in TCP/IP, and routing analysis of; BGP, MPLS, EIGRP, RIP OSPF, HSRP and ATM protocols. GCI has extensive experience in designing, implementing, and operating high-end enterprise networks is required. Experience must include implementing Cisco's Suite of routers and Layer 2 and 3 switches including; 7500, 7200, 3600, 2600, 6500 & 4500 series equipment. GCI has extensive experience in designing, developing, and deploying Quality of Service (QoS) mechanisms such as; Classification of Traffic, Prioritization, Queuing, Traffic Shaping, and Compression Efficiencies such as G.711 and G.729. GCI also has experience deploying large scale enterprise Multi-Protocol networks that support Voice, Data and Video applications. Our experience includes the successful design and implementation of these networks utilizing Cisco AVVID framework for networks.	
Category 6: Data Center Solutions	
Years Providing IT Consulting Services	21
Years in Which Services Provided	21
Description of Service(s) Provided: Datacenter Networking, Cisco Unified Computing System (UCS), Private Cloud (w/Flex pod) Inc., NetApp, IBM, Dell, Virtualization (Server, VDI, Application), Citrix, VMware, Unified Compute, Storage Area Networks – NetApp, Storage Architectures – NetApp, Disaster Recovery, Datacenter plant facilities (environmentals).	
Additional Information: GCI provides data network services that include planning, analysis, design, programming, documentation, installation, implementation, "trouble-shooting" and training related to LAN and/or WAN since 1992 (21 years).	
Category 7: Local Area Network	
Years Providing IT Consulting Services	32
Years in Which Services Provided	32

Description of Service(s) Provided: Services will be performed by personnel with experience performing network activities of increasing complexity within the past twelve (12) months. GCI has extensive experience with multiple protocols, topologies, and architectures; as well as with applications, protocols, and appropriate certifications. • Facility Infrastructure ((EIA/TIA 942, Uptime Institute, BISCI etc.) • Electrical design – power distribution inc. shore, generators, ups and other power components • HVAC systems • Seismic/ISO Base • Physical Security – access control, camera & management systems (construction of Alaska United Fiber Network). • Communication closet construction – main and intermediate distribution frame rooms • Building systems & wiring: ANSI/NECA/BICSI 568-2006 • Fire Alarm and Suppression systems • Systems Monitoring
Additional Information: GCI first built telco-quality long distance switching office in Anchorage in 1981 and carried the first call in 1982. We started building earth stations all over Alaska in 1995, and Central Offices in 1996 prior to launching our competitive local exchange services.

B2 Networks

Category 1: Telecommunications Consultant Services	
Years Providing IT Consulting Services	8
Years in Which Services Provided	8
Description of Service(s) Provided: Design/planning consulting services provider to multiple customer verticals offering assistance in requirements development/analysis, vendor selection, design/planning services and telecommunications systems optimization/operational streamlining.	
Additional Information: B2 Networks LLC is a leading Alaskan IT and communications network consulting firm offering design/build and IT project management services in practice areas that include voice/telephony, LAN/WAN and route/switch, security/VPNs and videoconferencing. B2 actively engages the whole Alaska market, providing services in both rural and urban Alaskan communities to a wide range of clients and customer types.	
Category 2: Telecommunications Planning, Analysis & Design	
Years Providing IT Consulting Services	5
Years in Which Services Provided	5
Description of Service(s) Provided: Spec/design/build/implement/deploy/manage and service IP telephony and unified communications systems. Managed ("turn-key") system deployments are a specialty.	
Category 5: Data Communications	
Years Providing IT Consulting Services	8
Years in Which Services Provided	8

Description of Service(s) Provided: B2 provides managed WAN, LAN (wired/wireless), security and communications systems services. B2 serves a wide variety of needs, from basic configuration assistance to managing turn-key deployment projects involving multiple sites across wide geographic areas.	
Category 6: Data Center Solutions	
Years Providing IT Consulting Services	4
Years in Which Services Provided	4
Description of Service(s) Provided: B2 provides design/deployment assistance with data center switching projects, offering customers implementation guidance for SAN turn-ups, virtualization projects and high-end application server design/deployment work.	
Category 7: Local Area Network	
Years Providing IT Consulting Services	8
Years in Which Services Provided	8
Description of Service(s) Provided: Design/build, troubleshooting, optimization and managed operations services.	

Cisco Advanced Services

Category 1: Telecommunications Consultant Services	
Years Providing IT Consulting Services	14
Years in Which Services Provided	14
Description of Service(s) Provided: Cisco Systems, Inc. is the worldwide leader in networking that transforms how people connect, communicate and collaborate by designing, manufacturing, and selling networking equipment.	
Additional Information: Cisco Advanced/Professional Services (A/PS) brings a unique, proactive and targeted approach to engaging with strategic PS AS customers. Employing a comprehensive diagnostic process that leverages the team's collective depth of expertise, AS collaborates with customers and Cisco Sales to assess customer goals and needs at the front end of the selling process. The continuity brought by AS solutions teams from beginning to end of a customer engagement ensures the best application of the right Cisco technology and expertise to advance the customer's mission, as quickly and smoothly as possible.	
Category 3: Telephone Communications	
Years Providing IT Consulting Services	14
Years in Which Services Provided	14
Description of Service(s) Provided: Develop, deploy and support Cisco's Call managers, Unity Voice Mail Servers, IP Contact Centers, ICD Servers, IP IVR Servers, Gateways, Cisco ATA devices and Soft, Wireless and 7900 series IP Phones.	
Category 5: Data Communications	
Years Providing IT Consulting Services	29
Years in Which Services Provided	29
Description of Service(s) Provided: Cisco Systems, Inc. is the worldwide leader in networking that transforms how people connect, communicate and collaborate by designing, manufacturing, and selling networking equipment.	

Additional Information:
Cisco Advanced/Professional Services (A/PS) brings a unique, proactive and targeted approach to engaging with strategic PS AS customers. Employing a comprehensive diagnostic process that leverages the team's collective depth of expertise, AS collaborates with customers and Cisco Sales to assess customer goals and needs at the front end of the selling process. The continuity brought by AS solutions teams from beginning to end of a customer engagement ensures the best application of the right Cisco technology and expertise to advance the customer's mission, as quickly and smoothly as possible.

Peak Signal

Category 2: Telecommunications Planning, Analysis & Design	
Years Providing IT Consulting Services	4
Years in Which Services Provided	4

Description of Service(s) Provided:
Peak Signals provides telecommunications system maintenance and management services for large scale entities. As a service company supporting federal DoD, federal non-DoD, state and local public safety communities, we specialize in the conversion of legacy analog radio systems over to newer IP/MPLS digital systems along with the required infrastructure.

Additional Information:
Peak's staff has extensive experience in telecommunications and RF engineering supporting large-scale networks.

Category 4: Radio Communications	
Years Providing IT Consulting Services	4
Years in Which Services Provided	4

Description of Service(s) Provided:
We specialize in planning, constructing and troubleshooting VHF / UHF radio systems and multi-hop microwave radio backhaul sites. Our work has been comprised of a broad range of expertise from engineering, tower work, civil construction, grounding, microwave, two-way radio, power systems, circuit analysis and troubleshooting.

Additional Information:
Aviat Networks (Harris)
Our company has an existing partnership with Aviat Networks (formerly Harris Microwave). As a qualified reseller of Aviat Networks microwave radios we have unique access to internal technical staff for assistance. We can provide cradle-to-grave services such as:

- RF link design and path analysis
- FCC licensing and frequency coordination
- Pre-deployment testing and configuration
- Transport and field installation
- Integration and testing
- Site maintenance and operations
- Decommissioning legacy hardware

While we continue to work on many older Harris microwave radios such as the Constellations, we have configured and installed many of the newer hybrid IP/Ethernet based radios produced by Aviat Networks. These packet radios are crucial to providing the backbone for future LTE networks.
Alcatel-Lucent
Our staff has worked with both Alcatel 7705 Service Aggregation Routers and the Alcatel 5620 Service Aware Manager, and we continue to increase our knowledge base on this new technology. These devices are currently being deployed in many remote communication sites across the state. They are used primarily in the conversion of the existing backhaul infrastructure to support IP/MPLS networking. During a previous circuit analysis project, our Engineers provided assistance and consultation for the process of integrating IP solutions into the legacy TDM network.

Aside from the Alcatel-Lucent network equipment we have also installed and maintained point-to-point microwave equipment provided by this manufacturer.

Motorola

Historically Peak Signals staff have been directly involved in the initial development and deployment of the Alaska Land Mobile Radio System (ALMR). The ALMR network is a digitally trunked interoperable P25 public safety radio system. Involvement included all aspects from the input on the original design to factory acceptance testing on over two-thirds of the total Motorola equipment purchased for this system.

Peak Signals is a qualified subcontractor for Motorola and is called upon periodically to assist in both State and Federal radio projects. We have worked directly for Motorola in several mountain top site development projects which necessitate heavy-lift helicopter efforts.

Our Engineers and Technicians have direct experience programming Motorola handheld and mobile radios. We have also installed Quantar repeaters and frequency combiners. With an extensive inventory of RF test equipment we are able to troubleshoot common radio issues such as intermodulation and coverage problems. Both our Fairbanks and Juneau facilities have high-bay shops allowing us to perform vehicle installations for mobile radios.

Conventional Two-way Radio

Many times we find the need to provide conventional VHF radio communications in areas that do not have a microwave backhaul for IP/Ethernet traffic or don't necessitate the cost of a fully loaded Motorola ALMR solution. Peak Signals' staff is experienced in configuring and installing Daniels radio repeaters and base stations along with the necessary infrastructure.

Telecom Concepts LLC

Category 1: Telecommunications Consultant Services	
Years Providing IT Consulting Services	6
Years in Which Services Provided	2007 - 2013
Description of Service(s) Provided: Network and infrastructure design in support of Cisco VoIP installations. Logistics for system deployment in multiple locations and system commissioning.	
Additional Information: Telecom Concepts provides engineering, consultation, and project management for Layer 1 projects to support network and VoIP deployments. With extensive experience working with large enterprise customers to develop standardized specifications to support the customers long term goals and to provide true value.	
Category 7: Local Area Network	
Years Providing IT Consulting Services	12
Years in Which Services Provided	12
Description of Service(s) Provided: Infrastructure design in support of network upgrades and installations. Provide design and consultation services for the enterprise data center with the focus on long term efficiencies and ease of operation. 12 years' experience with enterprise infrastructure design and implementation.	
Additional Information: Telecom Concepts has a great deal of experience to demonstrate their expertise in this area:	

- SOA data center cabling installation and QA.
- UAF VoIP remediation design and implementation
- UAA Community Campus VoIP remediation and implementation
- State of Missouri VoIP deployment and remediation
- ASD Data Center re-location project

Aqueon

Category 1: Telecommunications Consultant Services	
Years Providing IT Consulting Services	8
Years in Which Services Provided	8
Description of Service(s) Provided: Telco Consultant Services	
Additional Information: Acqueon products and solutions are designed to drive customer loyalty via the contact center. Our main Products are List and Campaign Manager for Cisco UCCE and Unify Predictive Dialer for Cisco UCCX.	

Hotwire Communications, LLC

Category 7: Local Area Network	
Years Providing IT Consulting Services	Hot Wire Communications LLC – Eight (8) Years Hot Wire, LLC – Twenty Three (23) years
Years in Which Services Provided	8
Description of Service(s) Provided: Complete Telecommunications Service, (including voice/data networks covering project management, engineering, and installation) Complete inside commercial electrical installation Computer cabling with terminations, testing including category 5 through 6e installation and certification Complete Fiber optic networks Specialty fabrication, system design, consulting and engineering Day labor, hourly or flat rate (quote) Sound/Intercom, Paging and CCTV Systems Access Control and CATV Systems	
Additional Information: Prior to initiating any project, completion milestones are established on a flow chart to meet the customer's needs in interfacing various segments of the overall project. Daily or weekly project time reports are made for every person on the project and copies are supplied to the customer for approval. Hot Wire's in-house staff tracks all project data, labor, travel, material, and miscellaneous expenses. Using our job costing system enables us to supply percentages of completion and current expenditures on a weekly or monthly basis, depending upon the input cycle and customer requirements. Hot Wire has all necessary installation tools and equipment as required and will acquire additional equipment and test gear on an as needed or job required basis.	

Hot Wire has always supplied material to its vast array of customers and job sites; therefore, purchasing, warehousing, shipping and receiving of material have no impact on our overall efforts. Utilization of our purchasing and warehouse departments allows additional savings to be passed on to our clients.

Hot Wire's project managers, engineers, and technicians are fully trained and factory certified for each product or service provided. Hot Wire's support staff is one of the finest in the State. Our clients enjoy open communication and specialized treatment from its staff.

Denali Mechanical, Inc.

Category 7: Local Area Network	
Years Providing IT Consulting Services	32
Years in Which Services Provided	32
Description of Service(s) Provided: Plumbing, Heating, HVAC, and other construction, repair, and improvements to mechanical systems	
Additional Information: Denali Mechanical, Inc. has been in the Mechanical Contracting business since 1981. Since then we have had extensive experience in construction, repair, and improvements to mechanical systems in the Fairbanks, Alaska area. Our past experience and proven record of professional quality installations and responsible service has established a long list of return customers. A good working relationship with our customers is a top priority. We have a good alliance with local suppliers and receive volume purchase discounts that can be passed on to our customers. Denali Mechanical, Inc. works constantly to give our customers the best prices available. We also have a working knowledge of area specialty contractors and the quality of their work. Using only experienced/licensed/bonded subcontractors eliminates the uncertainty of hiring someone whose work you are not familiar with.	

Alaska Commercial Contractors, Inc.

Category 7: Local Area Network	
Years Providing IT Consulting Services	6
Years in Which Services Provided	6
Description of Service(s) Provided: Activities required for wall construction and mobilizing and setting sensitive equipment for other trades	
Additional Information: General Contractor specializing in turn key buildings, interior and exterior renovations. Experience managing and completing projects in sensitive building spaces such as data centers, banks, hospitals, etc.	

Eaton Corporation

Category 7: Local Area Network	
Years Providing IT Consulting Services	20
Years in Which Services Provided	20
Description of Service(s) Provided: We are the manufacturer of Eaton Powerware UPS units and the sole source provider of factory trained and authorized technicians to service the units we manufacture.	

Behrends Mechanical, Inc.

Category 7: Local Area Network	
Years Providing IT Consulting Services	19
Years in Which Services Provided	19
Description of Service(s) Provided: Provide piping installation, repairs, equipment	
Additional Information: Behrends Mechanical, Inc. provides 24 hour service, and while we don't personally perform AC service work, we have access to three local companies that can perform the work.	

IPVision Inc.

Category 7: Local Area Network	
Years Providing IT Consulting Services	8
Years in Which Services Provided	8
Description of Service(s) Provided: IPVision specializes in IP base Physical Security Solutions from the industries top manufacturers. Physical Security includes Video Surveillance, Access Control, and Intrusion Detection. IPVision provides turnkey systems from Design to installation and to post install support. We have BICSI and RCDD certified infrastructure technicians for all cabling requirements. • Systems Engineers with specialty certifications from Cisco, AXIS, Genetec, ONSSI, Milestone, Honeywell, HID, DMP, and more for complete Physical Security solutions from the world's leading manufacturers. • Video Surveillance, Access Control, Intrusion Detection: • Plan, Design, Install, Train, and Support of IP based Physical Security Systems. Complete turnkey solutions from cabling to ongoing maintenance and support	
Additional Information: IPVision has 75employees that hold the following certifications: • Cisco ATP Certified Physical Security USA • Cisco ATP Certified Physical Security India • Cisco ATP Certified Latin America • AXIS Global GOLD Partner Certified • Genetec Global GOLD partner Certified • ONSSI, Milestone Global partner Certified	

B) Offeror's Statement of RFP Understanding and Intent

Provide brief statements that demonstrate a thorough understanding of the intent of this RFP and the objectives and scope of the resulting contract awarded. Offerors must demonstrate an understanding of the issues involved and any constraints that may affect the performance of services under any resulting contract. Also, describe your understanding of key issues that may be unique in providing services to government agencies in the State of Alaska.

Intent:

WWT's understanding of the intent of the Request for Proposal is to identify a contractor who is best suited to work with ETS and other state IT agencies in support of the current SOA , Cisco, Telecommunications infrastructure needs and who can be relied on to integrate future solutions across a broad range of OEMs and technologies. It will be critical to select a vendor with institutional knowledge of the SOA's IT infrastructure standards as well as the enterprise landscape, functionality, and interoperability of the SOA network to assure an efficient approach in pursuit of the SOA's IT objectives. The successful company needs to be a reliable business partner in adding value to the IT initiatives of ETS while being cognizant of the interdependencies throughout the network – both technical and political.

Objectives & Scope:

WWT's understanding of the primary objective and scope of this RFP is to assure continuity and quality IT services by leveraging a highly qualified Professional Services organization, to meet the changing and progressive needs of the SOA enterprise, through the flexibility and convenience of a pre competed contract vehicle. For a candidate to be effective in support of ETS, there will need to be a strong local presence to be nimble and flexible in responding to the immediate integration needs as well as any on-going support required of the solutions deployed.

Performance Impacting Issues and Constraints:

The efficiency and effectiveness of fulfilling the performance and service requirements of this RFP can only be achieved through thorough understanding of the issues below:

Technical aspects

- The SOA's WAN Cisco network and architecture
- Enterprise voice services as provided by ETS
- The lifecycle of equipment on net along with the configuration standards employed over the SOA's VoIP platform.
- The technical challenges in designing Network and Voice services for Enterprise with network resources constrained by geography, climate, and available bandwidth
- The unique interconnections between state data and voice networks and other users, such as Veterans affairs, Corrections, University of Alaska.
- Understand the state's data center model, based on design, installation, and troubleshooting work performed. Also understand from a consumer point, as voice services are a customer of the data center model.
- The history and operation of legacy voice services still in use, such as line-side T1s, departmental overhead paging systems, legacy IVR systems.
- The need and challenges in expanding state voice system to cover more remote facilities in areas not served, such as Bethel, Nome, Barrow.

- Understand existing facility infrastructure for HVAC, power, fiber, seismic, and capacities currently in place
- Understand the SATS network and ALMR radio environments and interoperability requirements
- Institutional knowledge of agency site network configurations, due to UPS maintenance program and installation done as part of voice upgrade.

Philosophical, business, and political aspects

- The philosophy and value in fostering an enterprise approach to meeting the broader IT objectives of the SOA
- Understanding of the dynamics around Multi agency IT groups that serve the SOA
- Understand the challenges in meeting the unique requirement from disparate agencies
- The need to provide support and training via methods such as video to support remote installations.
- The business process knowledge of most agencies as a result of telephone, IVR, and call center projects with every department in the state.
- Understand state enterprise security objectives through ongoing project work with SSO.
- Understand state agency security objectives through ongoing project work with departmental networks.
- Understanding of the service providers and the infrastructure by carrier throughout the state
- Understanding and respecting the SOA governance process

The above is a brief summary of the value this contract will bring to the SOA in addressing the State's IT needs as well as highlight the critical issues around the SOA environment that need consideration to assure success of ETS projects. Any viable candidate will need a broad understanding of the SOA's environment to efficiently and successfully bring projects to completion. WWT, through our years of service to the SOA, is confident in our ability to deliver quality results in the years ahead.

C) Offeror's Project Management and Quality Assurance Methodology

Describe the proposed Project Management and Quality Assurance methodology generally used by the Offeror's normal course of business. Include the management and administrative structures (organization) and procedures used by the Offeror. Also include a discussion of methods used to ensure communications are maintained, scope is controlled, and how performance and service delivery issues are resolved.

WWT has worked closely with the State of Alaska's ETS Department and SOA Agencies throughout the last several years to develop an integrated Program and Project methodology that reflects the State's desire for visibility into the many ongoing projects within the State's portfolio of initiatives. The WWT management goal is to create a strategic program that manages multiple projects simultaneously. This is possible by implementing solid Program/Project Methodologies through proper planning, communication and execution by providing the correct information to the right stakeholders, at the right time, allowing proper project visibility and status to and within the agencies. This has been accomplished by creating a project status dashboard reporting methodology developed in conjunction with the State project managers. This methodology has been so effective that occasionally WWT has been asked to provide Project Management services for initiatives that would normally be managed within ETS or an agency.

Outlined below is the Professional Services organization team that supports the State of Alaska:

Professional Services Organization

WWT's Alaska Professional Services organization staffed and managed locally, with strong ties back to our Headquarters in St. Louis, MO. Starting at the top of the Organization:

Tom Gain: V.P. Professional Services, Tom has been working with the Alaska Team and the State of Alaska since 2006. Tom has visited and engaged with the state on at least a quarterly basis and has spent many trips engaging and supporting the State through and after the Telephone Replacement Project. Tom continues to take a very active role in assuring the success of WWT within the State, and serves as a corporate sponsor and escalation resource for SOA leadership.

Jim Steele: Director Professional Services Northwest, Jim was hired on with WWT in 2010 as a resource manager focused on the State of Alaska. Jim has been in telecommunications in Alaska for the past 11 years and has been supporting the State's needs since coming to WWT. All Alaska Professional Services resources report up to Jim, giving him the autonomy to provide the state the necessary resources to be successful.

Donnie Mays: Business Manager, Professional Services Northwest, Donnie has been with WWT since March 2010 and has responsibility for the Alaska project management organization. Donnie has been the executive manager of scores of projects each year within the SOA. Donnie has been supporting business within the state for over 37 years.

John Dyer: Delivery Manager, Professional Services Northwest, John has been with WWT since 2006 where he served as a Lead Engineer on the Telephone Replacement Project. John has a very diverse and strong technical background and is highly respected throughout the industry. John has served as the lead engineer for countless State projects over the years, and has recently taken his current role as resource manager and mentor to the Alaska Professional Services organization.

D'Aun Porter: Program Manager-State of Alaska, D'Aun has also been supporting the State since the original Telephone replacement project in 2006. She has managed hundreds of State projects and is dedicated to supporting the State at the programmatic and project level. D'Aun is the first point of escalation and is responsible for overall delivery and customer satisfaction of all projects within the State's portfolio. As Program Manager, D'Aun makes monthly trips to meet with ETS and other agencies to review overall status of projects, solicit feedback on current and/or completed projects and review potential and future initiatives. This approach is one of several investments WWT is willing to make at the Programmatic level at no cost to the customer to ensure open communication with SOA key stakeholders and meet the expectations of the State for all Program and Project initiatives.

Project Managers: WWT Alaska Professional Services team has six Project Managers (PMP Certified) that support the state on a project need basis. Several have been working on State projects for many years and have a deep knowledge and understanding of the unique requirement of doing business within and for the State of Alaska.

Engineers: WWT – Alaska professional services team consists of 25 Engineers with certifications and expertise that cover the broad and diverse requirements needed to support the State's needs. Additionally we have reach back into our national organization with 200+ additional engineers to support any requirements that cannot be staffed locally due to size, scale, or specialization.

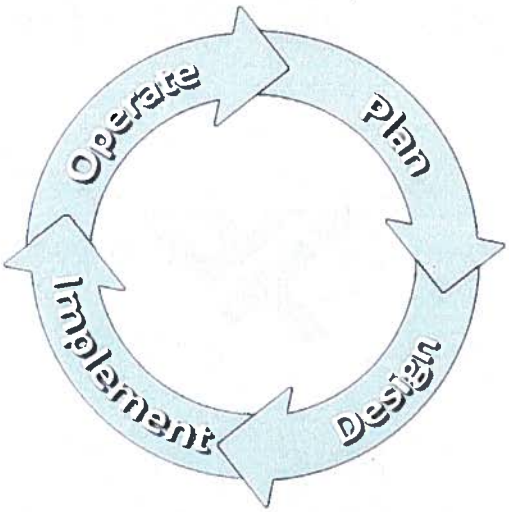
1. Program Management Methodology

Program Management is a strategic business management methodology that WWT provides for our large Enterprise customers. The objective to this approach is to have a Program Manager responsible for the State of Alaska business. This includes tracking submission and approval of all Work Orders, oversight to all Project Managers assigned to active SOA projects, monthly reporting via dashboards that summarize project status, reviewing and identifying interdependencies of multiple projects running concurrently, primary point of contact for financial, contractual, technical and program health for the term of WWT's engagement with the State. Program Management approach allows for on-going collaboration with the WWT team, WWT subcontractors, key OEM partners and key SOA relationships. The Program Manager will be the escalation point for any challenges that arise within the program. Having a Program management approach in place allows a high level executive overview to manage scope by project, timely communication and drive excellent delivery performance from WWT engineers and project managers. Many projects fail, not because the schedule was not planned adequately, but because the project is not tracked and managed throughout the lifecycle of the project. We believe we have all the ingredients for successful program and project management methodologies as outlined below.

Program Dashboard: The Program Dashboard report includes a list of the ongoing and pending Work Orders (WO) for collaboration on current WO status and impending action items. The Program Dashboard also provides status reports on all open and active projects, their health and overall status. These dashboards are submitted monthly to ETS leadership for review and shared with State stakeholders as ETS see appropriate.

2. Project Management Methodology

WWT utilizes the following proven methodology – engage, Plan, Design, Implement, Operate (ePDIO) - in delivering project requirements. EPDIO is based on the Project Management Institute (PMI) framework for project management. Our team believes that in order to provide superior service, we must look beyond what is written in the requirements and address the underlying business problems that they are intended to resolve.



- **Engage** - refers to the discovery process WWT and the State use to identify initiatives, create and execute a work order and fund the project. Depending on the complexity of the project, WWT will facilitate a "Project Scoping Workshop" that captures key technical requirements and business relevance as defined by the service being offered to State agencies. This is a collaborative effort with WWT, key OEM partners and State personal.
- **Plan** - refers to the project initiation phase when the project is started, resources are assigned, the Project Launch Workshop (PLW) is conducted and the Project Management Plan, Project Schedule, and project dependencies are identified and planned out to ensure project success. The plan will track the equipment logistics; WWT can order the equipment, store it in a secure location, stage, configure and ship the equipment to the meet the installation schedule. This phase will include site preparation planning and site verification to ensure the site locations are aware of the upcoming implementation on the scheduled date and time.
- **Design** - refers to completion of the technical architectural components of the project, including completing High and Low Level designs, Test acceptance criteria, final validation of Bills of Material and infrastructure requirements. All final designs are submitted for internal peer reviews at WWT prior to submitting to the SOA for review and approval. WWT has standard design templates that are consistent with each SOA project.
- **Implement** - refers to the execution phase of the engagement where all the planning and design components are brought together in the deployment of the solution. At the scheduled date and time, a WWT installation team will arrive at the site fully prepared to complete the job as planned. This team may be one person or several, depending on the size and complexity of the site. In addition, remote support may be used in order to ensure the most efficient rollout possible for SOA. After the site is migrated, the WWT installation team will perform the Acceptance Testing Plan (ATP) developed during the planning phase and will be prepared to roll-back the installation if necessary. Escalation procedures developed during the planning phase will dictate how the decision is made.
- **Operate**- refers to hand off and close out of the project. As a part of this phase WWT works with appropriate personnel to ensure all documentation is completed and provided to include Low level design, configuration, network as-built diagrams, and Day2 operational support requirements are addressed. The Project Manager also reviews all project deliverables with customer to ensure all requirements for a successful project have been met. After these steps have been completed, the PM will obtain Project Acceptance Sign-off from the customer and WWT formally turns the site over to SOA for daily operational support.

WWT's above methodology assumes that there is a tight integration between WWT and The State of Alaska (SOA). The methodology is based on sound best practices and allows for significant flexibility to accommodate the unique needs of the SOA Projects. Below we have outlined our Project Methodology Approach.

3. Project Methodology Approach

Project Scoping Workshops (PSW) – For large and complex enterprise projects, WWT will invest in a "Project Scoping Workshop" prior to finalizing the Work Order. This workshop is scheduled on site with SOA key stakeholders and includes WWT Account Manager, Consulting Sales Engineers, deployment engineers and project managers. This workshop provides a level-set for the scope of the Work Order, setting the language used in the Work Order. The Scoping workshop may include a High-level design session to ensure that the equipment being ordered is appropriate to meet user requirements. Also, critical details like site design templates, test procedures and configuration management may be addressed at a high-level during these sessions to ensure customer and WWT are proceeding with the same understanding of project criteria. WWT has worked closely with ETS and the SOA agencies over many years and has obtained intimate knowledge of the current SOA environment. This allows WWT to work closely with SOA key stakeholders during scoping workshops to look at the "vision beyond the scope" when developing enterprise designs.

Project Launch Workshops (PLW) – For large and complex enterprise projects, the WWT Project Manager will schedule a Project Launch Workshop to occur within two weeks of the Work Order Award. This allows WWT and SOA sufficient time to coordinate the proper resources and compile the necessary data to ensure a productive session.

These workshops are designed to turn the WO and preliminary Project Plans into operational implementation plans that all parties agree will do the job. This includes overall strategic planning, communication and escalation plans, gather technical requirements, discuss business relevance, identify project scope and reporting procedures. During this meeting, the Project Manager will work with SOA to perform the detailed planning necessary to ensure a successful engagement. The team will go through the proposal in detail to make sure that all parties are in agreement with the work plan that is about to be executed. In addition, important project process details will be worked out. These include:

- Project Charter
- Project Deliverables
- Roles and Responsibilities
- Communication Plan
- Technical Escalation Plan
- Risk Analysis
- Change Order Procedures
- High level Project Schedule
- Project Milestones
- Project and Budget Dependencies
- Financial Tracking and Analysis
- Training (As needed)

The Project Manager will provide Project Milestones and Draft Project Charter documents from the outcome of the PLW and publish to project participants, at the discretion of SOA.

Project Kick-off Meeting – For smaller projects, the WWT Project Manager will schedule a Project Kick-off meeting to occur within two weeks of the Work Order Award. This allows WWT and SOA sufficient time to coordinate the proper resources and compile the necessary data to ensure a productive session. A Project Kick-off meeting is a much shorter and less formal version of the PLW, which allows WWT and SOA personnel to review the Statement of Work, discuss the upcoming project, and agree upon a project charter. Since the project is much shorter duration and a less complicated engagement, WWT will prepare the project charter prior to the meeting and discuss it at the Kick-off. The goal is to make best use of everyone's valuable time for a simple project and still retain the importance of a PLW, which is to make sure everyone agrees on project success criteria and project deliverables in a Project Charter format.

The main deliverable from the Project Launch Workshop or Project Kick-off Meetings will be the Project Charter document, which is intended to clearly identify the scope of the project to include the items that are "in" scope as well as items that are "out" of scope. The charter will include the project objective statement with due dates, proposed budget, issues, risks, risk mitigation, communication plan, identifies project sponsors, roles and responsibilities, success criteria and summaries all project deliverables.

Project Communication

WWT believes in the spirit of "no surprises" which means communication and planning is critical to ensure successful project implementations. Below is an outline of the WWT project communication processes.

Each project has a weekly project dashboard report and RAID document published by the PM that addresses the project health. RAID is an acronym standing for Risk, Action, Issue and Decision. As a standard practice the PM tracks and manages to these disciplines within a project adding schedule, budget and change into the mix as appropriate. These status reports are generally followed up with a weekly project meeting with the key project stakeholders to address open action items, next steps, challenges, and opportunities.

Each week the project deliverable owners, including subcontractors, will return a Weekly Status Report (WSR) to the PM. These reports will include Risks, Actions, Issues, Decisions, Lessons Learned as well as Accomplishments and "next steps" for each deliverable owner. Below is an example of a Weekly Status Reports (WSR).

Example of Weekly Status Report (WSR)

World Wide Technology

VoIP Deployment
Daily Status Report for WSR

Confidential

WSR Tasks

Engineer	WWT Engineer
Week Ending	12/4/11
Total Hours	32.00

#	Date	Hours	Project	Tasks Completed	Challenges	Next Step / Resolution	Customer
1	6/4/12	8.00	103643	Draft Design final review and handoff via SalesForce.			Customer Name
2	6/5/12	3.00	103643	Troubleshooting of the caller ID. Changes made on WWT end as well as teleco. Final resolution with this and further testing conducted. Customer meeting as well discussing further RAID items.			Customer Name
3	6/5/12	3.00	103643	Internal Project Meeting - Discussion pertaining the ESW Software. Scheduled time to get final signoff of the draft design documentation. Scheduled a meeting for Friday with Engineers to discuss some of the dial plan settings that will need to be tweaked from the 81C perspective.			Customer Name
4	6/5/12	2.00	103643	Worked on the Unity voicemail pilot visio's. Uploaded these to the Sharepoint with a new version. This will be incorporated into the design documents and straighten up the question for this layout. Answered an email sent to me pertaining the network design. SVI QOS configuration will need a deeper look. A service-policy will need to be developed for qos across the SVI's.			Customer Name
5	6/6/12	8.00	103643	Worked on Unity voicemail Pilot			Customer Name
6	6/7/12	8.00	103643	Worked on UCCX configuration			Customer Name

#	HML	Deliverable	Date	Decision Required	Alternatives	Recommendation	Decision Maker
1	Mod	UCCX		Need to decide how customer wants to configure the UCCX			Customer
2	Low	UCCX		Need to determine best method to communicate			Customer

Issues

#	HML	Deliverable	Due Date	Issue	Surfaced By	Performer	Del Own
1	High	Site Readiness	06/30/12	Discovered bypass panels are required for the UPS, estimated ETA is November/December	Lloyd Schroeder	Customer	D'Aun Porter
2	Mod	Site Readiness	06/30/12	C-13 to C-14 power cords are needed because power strips were not compatible with redundant C210 power supply	Lloyd Schroeder	Mikey Hommel	D'Aun Porter
3	Mod	Site Readiness	06/30/12	Patch cables for servers to have redundant port channels	Lloyd Schroeder	Vendor	Customer

Risks

#	HML	Deliverable	Date	Risk	Contingency Plan	Trigger	Del Own
1	Mod	Design	07/08/12	Need to receive electrical design for Bldg #1	Working with Vendor to expedite	Due on 8/1/12; new date of 8/12/12	D'Aun Porter
2	Mod	Design	07/08/12	Need to receive electrical design for Bldg #2	Working with Vendor to expedite	Due on 8/1/12; new date of 8/12/12	D'Aun Porter
3	High	Site Readiness	07/15/12	Delay in Environmental Readiness in Bldg #1	Waiting on cooling and power designs; cost and scheduling need to be done as well		D'Aun Porter
4	High	Site Readiness	07/15/12	Delay in Environmental Readiness in Bldg #2	Waiting on cooling and power designs; cost and scheduling need to be done as well		D'Aun Porter

Next Steps

#		Deliverable	Date	Next Step	Del Own
1		UCCX	Next Week	Continue to configure UCCX	Lloyd Schroeder
2		Site	Next Week	Continue to work on Communication to Sites	D'Aun Porter
3		Design	Next Week	Track progress of site readiness and electrical designs	D'Aun Porter

Lessons Learned

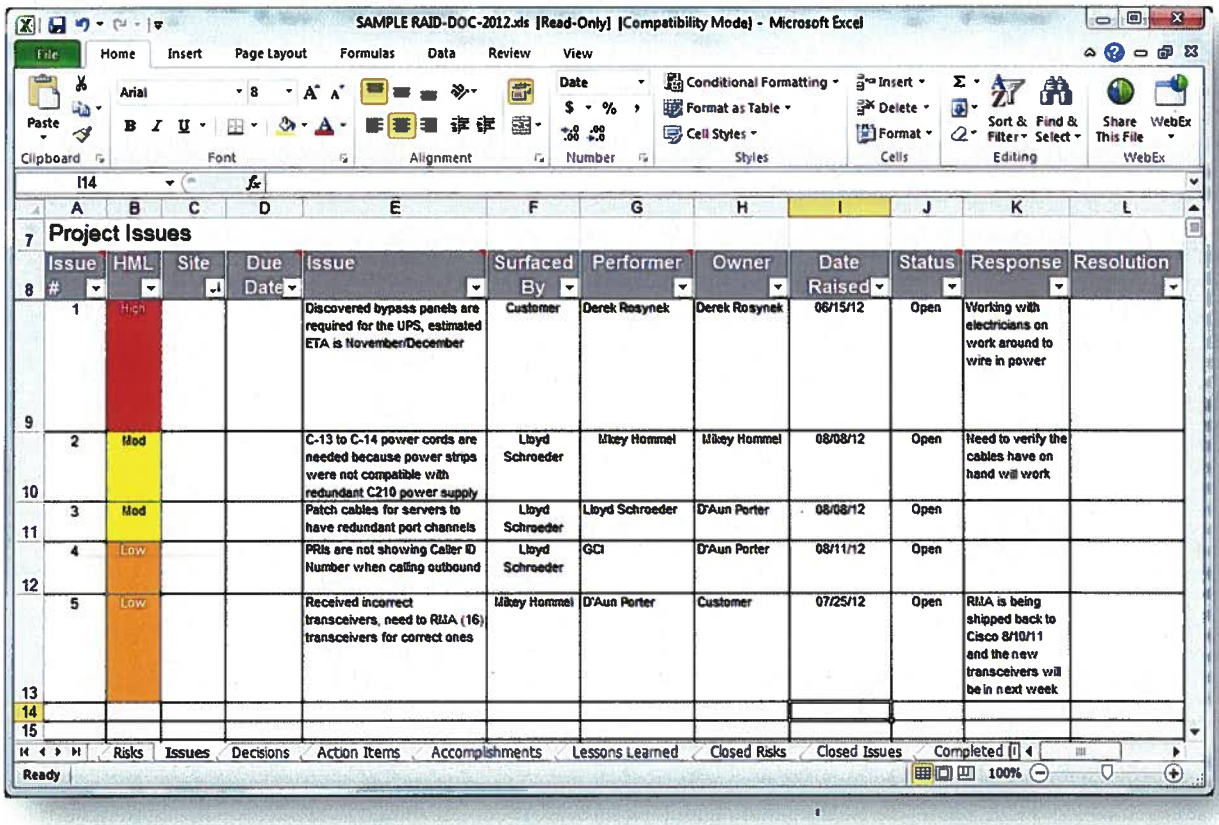
#		Deliverable	Date	Lesson Learned	Del Own
1			07/01/12	Need to allow sufficient time for the license registration process in the Unity PUT tool	Lloyd Schroeder
2					
3					
4					

SAMPLE WSR-20120508.xs 1 of 1 5/29/2013

The above WSR reports will be rolled into a consolidated weekly RAID document and all issues, risks, decisions and lessons learned will be captured into Excel workbook. These reports will be discussed during the weekly team meeting, and closed as appropriate.

During our weekly team meetings, we look at all the current risks, action items, issues and decisions. Any updates or changes are noted, and any that have been closed are moved to a separate worksheet. Below is an example of a RAID Document.

Example of Project RAID Document



Project Issues

Issue #	HML	Site	Due Date	Issue	Surfaced By	Performer	Owner	Date Raised	Status	Response	Resolution
1	High			Discovered bypass panels are required for the UPS, estimated ETA is November/December	Customer	Derek Rosynek	Derek Rosynek	06/15/12	Open	Working with electricians on work around to wire in power	
2	Mod			C-13 to C-14 power cords are needed because power strips were not compatible with redundant C210 power supply	Lloyd Schroeder	Mikey Hommel	Mikey Hommel	08/08/12	Open	Need to verify the cables have on hand will work	
3	Mod			Patch cables for servers to have redundant port channels	Lloyd Schroeder	Lloyd Schroeder	D'Aun Porter	08/08/12	Open		
4	Low			PRIs are not showing Caller ID Number when calling outbound	Lloyd Schroeder	GCI	D'Aun Porter	08/11/12	Open		
5	Low			Received incorrect transceivers, need to RMA (16) transceivers for correct ones	Mikey Hommel	D'Aun Porter	Customer	07/25/12	Open	RMA is being shipped back to Cisco 8/10/11 and the new transceivers will be in next week	

The high level information obtained from the above RAID document will be published into the following "Executive" Dashboard Report.

<u>Project Dashboard Report</u> – The status of all project deliverables along with all Risks, Action items, Issues and Decisions are obtained from the WSRs and RAID document which the PM will roll up into the weekly/monthly Executive Dashboard Reports. In this report all deliverables are given a Red, Yellow or Green status, providing the executive management team a high-level easy to read snapshot of where each deliverable is during the project.

If any deliverable has a status other than 'Green/Steady', the project team will provide one or two sentence problem statement, and another statement about how we can get the deliverable back to Green status. Below is a snapshot of a Project Dashboard Report.

Example of Project Dashboard Report

World Wide Technology, Inc. Confidential

Project Dashboard:
VoIP Phase I Project

6/8/2012

Health Rating / Trend

	Health	Trend	Project	Problem Statement (required if Yellow or Red)	Corrective Action (required if Yellow or Red)	Deliverable Owner
VoIP Phase I Project	Green	Steady	VoIP Phase I Project			D'Aun Porter
	Complete	Complete	D01: Project Kickoff Workshop			D'Aun Porter
	Complete	Complete	D02: Core Design			Lloyd Schroeder
	Yellow	Watch	D03: Site Readiness/Site Design	Timeline of completion of site readiness, ie UPS, power and environmental requirements impacted project implementation and schedule. Arctic Health & Duckering bldgs have power to move forward with Phase 1	UAF Facilities is working with contractors to complete power in Upper Dorm and will complete final power designs in Arctic Health & Duckering when bypass panels arrive onsite.	Lloyd Schroeder
	Complete	Complete	D04: Network Review			Jason Hamlett
	Green	Steady	D05: Voice Core Deployment			Lloyd Schroeder
	Green	Steady	D06: Voicemail Migration			Lloyd Schroeder
	Green	Steady	D07: Duckering Building			Lloyd Schroeder
	Green	Steady	D08: Documentation			Lloyd Schroeder
	Green	Steady	D09: Knowledge Transfer			Lloyd Schroeder
	Green	Steady	D10: Customer Responsibilites			D'Aun Porter
	Green	Steady	D11: Project Management			D'Aun Porter

Project Objective Statement

Complete design and implementation of Phase I voice core and voicemail install for xxxxx, including network installation and end points by September 30, 2012 for allotted budget.

Customer Project Manager	WWT Project Manager
xxxxx	D'Aun Porter

Flexibility Matrix

	Least Adjustable	Moderately Adjustable	Most Adjustable
Scope		✓	
Schedule	✓		
Budget			✓

Project Dashboard Report - 20120608.xls 1 5/29/2013

Strategic Project Controls and Techniques

WWT's Project Management Methodology encompasses efficient technical elements as well as proven management techniques and controls. When applied in a structured and rigorous manner, our methodology will help identify, reduce/mitigate and manage various risks. This approach guarantees our mutual success with effective management by the project team to deliver required business functionality within budget and on schedule. Below are outlined the strategic techniques and controls implemented by our WWT Project Managers. Based on experience deploying large enterprise size projects with complex scope and long term engagements, WWT has developed the following approach and techniques.

Our implementation approach, which incorporates milestone reviews, is crucial to reducing risk and improving the quality of results. In establishing our work plan activities, the project team is given specific responsibilities and tasks for identification, scoping and articulating risks at the earliest time. The project reporting and management process is constructed so that the leadership of the project and the assigned client personnel are aware of potential impacts to project timing, content and quality and are able to develop a mitigation plan for those risks. At each milestone, the effectiveness of the risk mitigation plan is evaluated and lessons learned are updated for future deployments. Risk Management is a continuing process throughout the entire project. As part of this continuing process we will:

- Identify project risks, focusing on expectations and assumptions surrounding each major project step throughout life of project
- Document specific risks and assign ownership of risk
- Prepare risk analyses, quantifying impacts on resources, project timing, and quality of deliverables
- Develop alternatives and action plans to mitigate risks
- Develop Change Orders if the scope of the project changes
- Monitor and update risk portfolio
- Escalate risks as necessary

This approach ensures WWT will never lose sight of the basic steps that goes with managing risk on a daily basis.

As with all projects, regardless of size, complexity and duration, events will sometimes occur that impact the project schedule, resource requirements, scope or budget. Clearly defining an agreed-upon process to identify, document, categorize and manage changes will be necessary to maintain effective control and prevent project "scope creep."

Any change of the assumptions or defined deliverables affecting the scope, schedule, budget, or other key element of project control will trigger a change order process. Once documented and logged, the change must be described, a resolution must be recommended, alternatives must be defined and the impact to the project budget, scope and schedule must be quantified. Any incremental fees resulting from the change order approval would become an additional fee authorization outside the scope of any previous fee authorizations. A specific time limit will be established for evaluation of the change order at each level of the Project Organization Structure. No additional commitment of fees will be made prior to approval of the change order.

The change order process will be managed by the Program/Project Manager including monitoring the routing and turnaround times. Reporting of approved and open change orders will be issued at routine intervals.

During our detailed "change analysis", we will work with our client personnel to identify all impacted groups within the organization. In addition to ensuring that these groups are trained in any new procedures required for their day-to-day jobs, WWT will develop a plan for ensuring communication during the entire implementation process.

Issue Resolution

The issue identification, management and resolution process is a key component to managing the risk of the project. The project manager will be tasked with managing and reporting on project issues and will be responsible for assigning a team member to own and research each issue, categorize issues, assign a resolution date and establish a priority. Issue management, like risk management, is a continuous process. All open issues will be reviewed during weekly project status meetings. Issues which are behind schedule will be communicated to the Program Managers or the Steering Committee. The communications path will be determined by potential impact to the project if the issue is not resolved promptly, and will require the owner to establish a corrective action plan to bring the issue to closure.

When the assigned team member updates the issue with a proposed resolution, the issue will be reviewed by our client and WWT Program Manager for a final decision, affirmation of the impact to the project and approval. Approved issues that have completed the issue resolution process or have an impact to the project schedule, budget, or resources will trigger the Change Order Process.

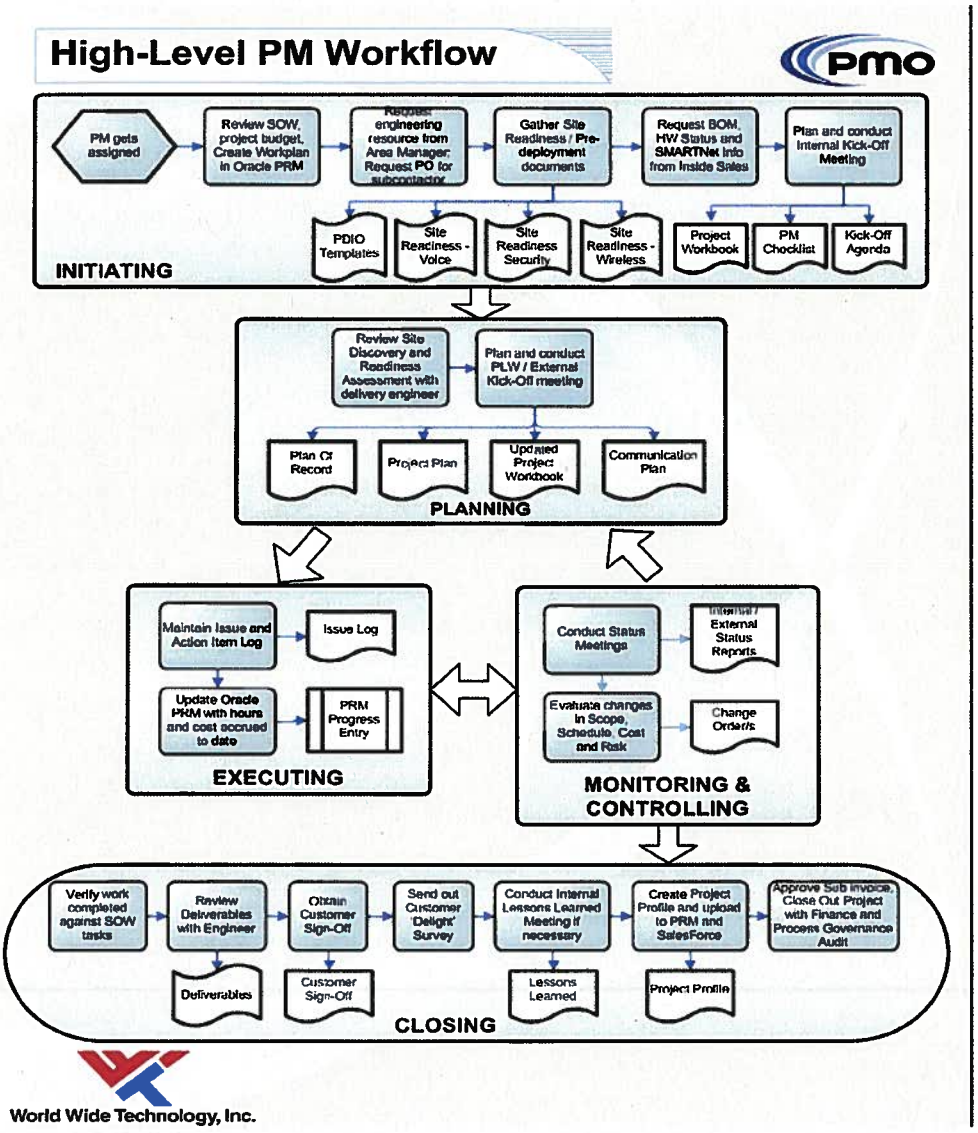
Subcontractor Management

WWT often utilizes Partners/Subcontractors to fulfill specialized expertise or requirements for a project. The PMI-based methodology integrates each individual project to ensure critical path items are identified and accomplished to ensure other projects are not delayed.

In addition, WWT shall put in place a number of Contractual and Statement of Work legal documents that ensure compliance with the contracted requirements, specifically:

- Partner agreement – Ensures contractual terms and conditions flow down from the customer, through WWT to the partner
- Statement of Work – A specific statement of work is implemented between WWT and each partner. This SOW calls out the requirements, tasks and responsibilities of each partner
- Partner Executive Sponsor – Each partner is required to assign an executive sponsor who has the responsibility to respond to/and correct any non-compliance issues as raised by the WWT Project Manager
- Each partner will be required to provide a project lead to ensure adherence to the rigorous change process to ensure that only approved changes are implemented during this Project.
- WWT teams with Partners/Subcontractors that have demonstrated past expertise in completing their assigned tasks with outstanding quality and timeliness. This experience and demonstrated achievement provides assurance that the WWT Team will meet and exceed SOA requirements.

Project Management Strategy Overview



Summary

WWT's Project Management Methodology encompasses efficient technical elements as well as proven management techniques and communication strategies. When applied in a structured and rigorous manner, our methodology will help identify, reduce/mitigate and manage various risks. This approach guarantees our mutual success with effective management by the project team to deliver required business functionality within budget and on schedule.

As stated earlier, many projects fail, not because the schedule was not planned adequately, but because the project is not tracked and managed throughout the lifecycle of the project. WWT has successfully deployed numerous large enterprise size projects by effectively applying defined program and project management methodologies.

While all of our solutions are customized to our customer's needs, they are all built upon the foundation of our Program Management. This consistent approach combined with the technical excellence of our engineers ensures a successful implementation.

D) Offeror's Work Order Cost Estimate Methodology

Describe methodologies used in preparing cost estimates in response to Work Orders.

As a company that is ITIL & ISO Certified, process and methodology is core to how we estimate projects. Creating an estimate that achieves the objectives of an IT project is an exhaustive process performed by the WWT team. This team includes the Account Executive, Consulting System Engineers, Consulting Solution Architects, Program/Project Managers, and Deployment Engineers that specialize in the technologies that are part of the solution. The procedure begins with a project scoping and discovery effort with the requesting agency. The nature of the scoping meeting and discovery effort is to get a clear understanding of the IT requirements and objectives and identify the variables that need to be considered to assure success of the project. It is important to note that no two IT projects are ever the same. No matter how similar they may seem, there are always variables that will cause deviations between like projects. Business requirements, timelines, technical requirements, project complexity, assumptions, and dependencies must be clearly understood to formulate an accurate estimate.

Once we are confident we have gathered all relevant information needed to determine the scope of the project, we begin the process to determine the level of effort required to achieve the agency objectives. This involves an effort among the WWT team to grasp all of the known elements of a project. The team creates a project level of effort structure that includes:

- Project background overview
  - Outlines the agency's requirements and objectives for the project
  - Defines the role WWT will provide in meeting these goals
- Statement of Work outline
  - Deliverables to be provided
  - Phases and tasks for the work to be performed
- High Level Design drawing
  - Visual depiction of the solution to be provided
- Work breakdown structure
  - Project phases and task with cost breakdown
  - Resource role types needed both onsite and offsite
- Bill of Materials list
  - Hardware and Software required to complete project

The team uses several metrics to estimate the number of hours each phase and task will take to complete. As WWT has completed hundreds of projects for the SOA, past performance data and a deep understanding of the SOA processes and technical environment help provide the ability to be very accurate in these estimates.

Once the level of effort is complete, the WWT Business and Delivery Management team determines resources for the project that have been vetted and approved for work by the SOA. As WWT has a long working history with the SOA, WWT has staff that has already been approved for work on the SOA network.

The project level of effort structure is then translated into the SOA Work Order format. Final pricing is calculated based on pre-approved rates by resource, subcontractor costs, and bill of materials costs as determined by the SOA Work Order system.

Once the Work Order is created, it goes through an internal peer review process to validate the accuracy of the scope and estimate. The final price with applicable ETS fees is then calculated and presented to the SOA procurement team and agency representatives for final approval.

Upon project completion, a project postmortem is performed to compare the project estimate vs. actuals. We learn things that were accurate, things that took longer than expected, unforeseen risks, and other key elements about the project that will help us improve. This information is then added to an extensive list of past performance data. Leveraging historical information is very valuable in creating accurate estimates. WWT is constantly working on ways to improve the delivery of our services, become more efficient, decrease hours, and add value to the SOA.

Offeror's Qualifications for Categories and Services (Section 7.02)

Table of Contents **Page**

Category 1: Telecommunications Consultant Services **54**
State of Alaska: Enterprise VoIP Project 54
Anchorage School District – Network Refresh 55
AT&T Mobility: Supply Chain Program 56
Verizon: Supply Chain Program 57
Emerson Electric: Global UC 58
Category 2: Telecommunications Planning, Analysis & Design **60**
State of Alaska: Haines ALMR Site Installation 60
State of Alaska: SATS/ALMR Feasibility Study 61
GCI: Managed Broadband Network Services 62
Pacific Gas & Electric (PG&E): IPICS Integration Project 63
Category 3: Telephone Communications **65**
University of Alaska, Anchorage: IPT Project 65
University of Alaska, Fairbanks: IPT Project 66
State of Alaska: Enterprise VoIP Migration Project 67
State of Missouri: Enterprise UC 69
Clorox: UC and AVVID Project 70
Category 4: Radio Communications **72**
State of Alaska: Beaver Creek ALMR Site Development Project 72
BP: Alaska Trunked Radio Project 73
BP: Gulf Coast Restoration Organization (GCRO) 73
Motorola: ALMR Implementation Project 74
ConocoPhillips: Alaska Radio Network 75
Madison County Sheriff's Office: Mobile Communications Initiative 78
Sikeston, MO Dept. of Public Safety: IPICS 79
Category 5: Data Communications **80**
Anchorage School District: Network Refresh 80
State of Alaska: Frontier Building Remediation Project 81
State of Alaska: Juneau Microwave Upgrade 82
State of Alaska: Identity Services Engine (ISE) Deployment 83
GCI: Turbo Zone Broadband 84
Alabama National Guard: Cisco Identity Services Engine (ISE) Deployment 85
Pacific Gas and Electric (PG&E): Data Center Modernization Project 86
Category 6: Data Center Solutions **89**
State of Alaska, ETS: Cisco Nexus & UCS Deployment 89
State of Alaska, Dept. of Natural Resources: Datacenter FlexPod Deployment 90
Factory Express: Cloud Infrastructure Integration and Deployment 91
Mercy Health: Data Center Server Virtualization and Consolidation Project 92
University of Arizona: Datacenter Project 94
Category 7: Local Area Network **95**
State of Alaska: JDC Cooling Project 95
University of Alaska, Fairbanks: Building Remediation Project 96
State of Alaska: UPS Maintenance Program 98
Panduit: Enterprise Physical Security Solution 99

Category 1: Telecommunications Consultant Services

State of Alaska: Enterprise VoIP Project

Company and contact Information	**DOA, Enterprise Technology Services** John Monagle Data Processing Mgr III (907)465-5793 john.monagle@alaska.gov 333 Willoughby 5th floor Juneau, AK 99811
Brief Description of Work	In early 2012, WWT began work on the upgrade of the enterprise Cisco telephone system. The first phase of this project consisted of analysis, assessment, planning and customer relations campaign titled the Discovery phase. This phase informed the statewide telephone user community of the upcoming upgrade as well as solicited feedback from the community on system needs and desired features. This campaign required considerable project and schedule management efforts to manage 25 sessions across all State Agencies and departmental groups. The Discovery phase created an assessment of the existing IP Telephone system issues and desired features. This assisted in the second phase of the project, titled the Design phase, by providing input for features such as paging, fax, video, recording, etc. to include in the design. The Design phase of the project consisted of cost analysis and system recommendation & design for a newer voice system with upgraded services and a higher degree of integration between cities than the previous system. This design used analysis of the existing system, results of the Discovery phase, and best practices to create a single, unified IP PBX structure for the State of Alaska enterprise.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Planning, cost benefit, analysis, assessment, and design for telephone, video, radio, paging, broadcasting, and voice applications • Telecommunications Development/Architecture/Systematization • IP Telephony Services (CISCO)
Subcontractors	None
Dates of Engagement	Start Date: November 2011 Completion Date: June 2013 (expected)
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off for the Discovery Phase in May, 2012. Cost of services for the project was $100K. The project was completed on schedule in 6 months. The Design Phase schedule was extended due to unexpected variables, the project is in final completion and deliverable acceptance and signoff is expected in June 2013. Cost of services for the project is $350K.

Resources utilized	Qualified resources, as described in the RFP, utilized for the two phases of the telecommunications upgrade: • Professional • Expert • Project Manager

Anchorage School District: Network Refresh

Company and contact Information	**Anchorage School District** Mike Fleckenstein Executive Director of Information Technology (907) 742-4616 Fleckenstein_mike@asdk12.org 540 Dyea Ave. JBER, AK 99505
Brief Description of Work	The Network Refresh project was a design/build contract that refurbished the existing Network Core, WAN, and 106 school networks. It also augmented existing wireless coverage in the schools. ASD had 19 prioritized wireless and route/switch items to accomplish in the 106-site district wide refurbishment. The budget estimated that available funding would allow the completion of priorities 1–14. The WWT response allowed for all 19 priorities. In some school sites, it allowed for extra items accomplished. The project included more than 5900 pieces of equipment that were inventoried, asset tagged, burnt in, configured, and kitted at the WWT ITC and then shipped on pallets to a local cross-dock. The equipment was then installed with final implementation on site at 106 locations within an 18-month time frame. This project included precision in creating, maintaining, and monitoring project schedules.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Creating, maintaining, and monitoring of project schedules for supply chain services that adhere to strict policies and procedures for customer satisfaction • Telecommunications Business Consulting such as Supply Chain, Staging/Kitting, Asset Management, Logistics/Warehousing, Asset/Life Cycle Management, Equipment Pre-Configuration, Equipment Imaging, Asset Tagging, Burn-In, Remote Access, Reporting, Billing, etc.
Subcontractors	Hotwire
Dates of Engagement	Start Date: April 2010 Completion Date: October 2011
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off in October 2011. Cost of services and hardware/software for the project was $11M. The project was completed on schedule in 18 months.

Resources utilized	Qualified resources, as described in the RFP, utilized for the network refresh upgrade project: • Entry • Associate • Professional • Expert • Project Manager

AT&T Mobility: Supply Chain Program

Company and contact Information	**AT&T Mobility** Jeff Cantwell JC5261@att.com Executive Director – Logistics 1277 Lenox Park Blvd NE Atlanta, GA 30319
Brief Description of Work	WWT performs forward logistics for new product, reverse logistics for reclaimed material, technical services, outbound transportation management, as well as management of over 50 3PL-subcontracted cross-docks. This includes the receiving, tagging, testing, storage, kitting, integration, repair (including the triage of all RMA material, testing and repair), disposal and shipping of all major cell site technology for AT&T. WWT operates a 700,000 square foot national distribution center dedicated to AT&T Mobility out of Edwardsville, Illinois (St. Louis metro area). This operation is the central hub for all AT&T Mobility network infrastructures across the United States and Puerto Rico and distributes more than 600,000 assets annually valued over $1B. The warehousing of the equipment and the integration, refurbishing, and project management are all handled at our dedicated WWT facility in Edwardsville, Illinois. WWT program management is closely aligned with AT&T's logistics team. This program requires detailed process and procedures that conform to policy requirements. Precision in creating, maintaining, and monitoring supply chain schedules is critical to the success of this program.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Telecommunications Business Consulting such as Supply Chain, Staging/Kitting, Asset Management, Logistics/Warehousing, Asset/Life Cycle Management, Equipment Pre-Configuration, Equipment Imaging, Asset Tagging, Burn-In, Remote Access, Reporting, Billing, etc.
Subcontractors	None
Dates of Engagement	Start Date: 2005 Completion Date: This is an ongoing contract

Cost, schedule, and deliverables acceptance	As a long standing contract, AT&T continues to recognize significant value in the supply chain services provided by WWT. In 2012, for example, there were $59M in billable services provided and we exceeded our SLA benchmark more than 99% of the time. Some recent awards bestowed on WWT from AT&T include: 2008 – AT&T Supplier Recognition Award for Customer Service 2010 – AT&T Supplier Award (1 of 6 recognized by AT&T)
Resources utilized	Qualified resources, as described in the RFP, utilized for the services under this contract: • Entry • Associate • Professional • Project Manager

Verizon: Supply Chain Program

Company and contact Information	**Verizon** Donna Erhardt-Weaver Director Strategic Sourcing and Supplier Diversity Note: To facilitate direct contact with Verizon, please contact WWT Client Director James Ertle at (314) 605-8721 or james.ertle@wwt.com 140 West Street New York, NY 10007
Brief Description of Work	Leveraging the supply chain capabilities of the ITC, WWT preconfigures critical network equipment for rapid deployment into Verizon's national communications network. The warehousing of the equipment and the integration, refurbishing, and project management are all handled at our dedicated WWT facility in Edwardsville, Illinois. WWT program management is closely aligned with Verizon's logistics team. This program requires detailed process and procedures that conform to policy requirements. Precision in creating, maintaining, and monitoring supply chain schedules is critical to the success of this program.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Telecommunications Business Consulting such as Supply Chain, Staging/Kitting, Asset Management, Logistics/Warehousing, Asset/Life Cycle Management, Equipment Pre-Configuration, Equipment Imaging, Asset Tagging, Burn-In, Remote Access, Reporting, Billing, etc.
Subcontractors	None
Dates of Engagement	Start Date: 1999 Completion Date: This is a current ongoing contract

Cost, schedule, and deliverables acceptance	The value of our supply chain services continues to grow and year to date Verizon has spent $43M with WWT for this service.
Resources utilized	Qualified resources, as described in the RFP, utilized for the services under this contract: • Entry • Associate • Professional • Project Manager

Emerson Electric: Global UC

Company and contact Information	**Emerson Electric** 8000 West Florissant Road St. Louis, MO 63136 Note: Please contact WWT Account Manager Carol Davis at carol.davis@wwt.com to facilitate direct contact with this customer
Brief Description of Work	Originally awarded in 2010, this project for a contract global Unified Communications product and services contract to be deployed over five years. Prior to this project, WWT had been providing substantial IT services to Emerson for more than five years. Emerson's primary objective with this project is to move from disparate communication systems to a centralized UC environment that is flexible, cost-efficient and "future proof". Implementing a UC infrastructure to selectively support evolutionary integrations of key UC applications allowing identity-based device independent communications, IP-based voice and video conferencing, interoperability with messaging platforms, network based collaboration tools, presence, Communications-Enabled Business Process (CEBP) integrations, consolidated UC activity data collection and reporting tools are elements to allow for continually evolving the effectiveness of the UC solution. Initially WWT provided the design and architecture for the global UC deployment sized for 60,000 handsets across approximately 250 manufacturing locations worldwide. Additionally the system accommodates approximately 129,000 total employees, including remote workers. WWT has been tasked to institute a global program to successfully design, implement, and support a Unified Communications platform, which will enable Emerson to provide a value-added service to their operating companies. WWT is providing a complete design build of a Cisco UC solution with Cisco Contact Center Express, Cisco 2921 Routers and Layer 3 Switches and replacement of an existing Paging System integration.

Scope and Intent of Category *Subcontractors*	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Telecommunications Development/Architecture/Systematization • IP Telephony Services (CISCO) None
Dates of Engagement	Start Date: July 2010 Completion Date: Ongoing
Cost, schedule, and deliverables acceptance	The total cost of the project is expected to exceed $30M over 5 years. To date WWT has successfully deployed substantial components of the global UC infrastructure on time and within budget.
Resources utilized	Qualified resources, as described in the RFP, utilized for the two phases of the project: • Entry • Associate • Professional • Project Manager

Category 2: Telecommunications Planning, Analysis & Design

State of Alaska: Haines ALMR Site Installation

Company and contact Information	**DOA, Enterprise Technology Services - SATS** Dean Strid, PE 907-269-5764 dean.strid@alaska.gov 5900 E. Tudor Rd Anchorage, AK 99507
Brief Description of Work	In July of 2009 WWT partnered with Peak Signals and the SOA to develop a new P25 Alaska Land Mobile Radio (ALMR) site on a mountain above Haines. This project necessitated the actual site selection, permitting and raw land development at this location. Technical Path-Loss analysis was performed for the point-to-point microwave system providing digital telecommunications connectivity to Skagway. Radio coverage testing was also used in determining the best location. Since this site was developed from raw land, our staff performed logging and clearing tasks and brought in heavy equipment via helicopter to support construction. A significant amount of hard-rock drilling was necessary for the tower foundation which our staff accomplished. Our experience with heavy lift helicopter usage was utilized in the placement of the communications shelter and supporting equipment. Peak Signals staff was also involved in the installation and alignment of the point-to-point digital microwave and the majority of the Trunked Land Mobile Radio equipment. The Haines ALMR site project required expertise in telecommunications, microwave radio systems and engineering and remote logistics. This project included analysis, design, documentation, RF engineering and project leadership for the implementation of a digitally trunked two-way radio and broadcast system.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • This project provided design, planning, and implementation of end-point security for wireless and mobile devices within the SOA WAN infrastructure. It also includes provisions for extending end-point security to wired devices in the infrastructure. • Cisco, Motorola, Harris, and Alcatel Technologies • Interoperability of TDM and WAN packet switching transport technologies
Subcontractors	Peak Signals
Dates of Engagement	Start Date: July 2009 Completion Date: August 2009

Cost, schedule, and deliverables acceptance	Received acceptance and project sign off in August 2009 when the infrastructure and connectivity were in place. Cost of the deployment for Peak Signals was approximately $150,000 with the overall project cost around $1,200,000. Duration of the deployment project component was two months.
Resources utilized	Qualified resources, as described in the RFP, utilized for this microwave project: • Professional • Expert • Project Manager

State of Alaska: SATS/ALMR Feasibility Study

Company and contact Information	**DOA, Enterprise Technology Services** Jim Kohler Telecom Special Projects Admin (907)723-9686 333 Willoughby, 5th Floor Juneau, AK 99811 Adam Paulick Deputy Director - ETS (907)269-5773 adam.paulick@alaska.gov
Brief Description of Work	**ALMR Feasibility Study:** In March 2010, the U.S. Army Alaska (USARAK) notified the State of Alaska of its intent to divest itself of LMR radio equipment currently housed in thirteen (13) State of Alaska sites. Alaska Land Mobile Radio (ALMR) is the two-way radio system in use today by first responders and public safety officials for instant, effective, and private communications during everyday operation, and also provides the efficiency, security and flexibility required during emergencies for secure, communications on demand and in real time. This decision required the State of Alaska to determine and defend budget allocations for ALMR expenditures. Given its extensive involvement and familiarity with the SOA's IT network as well as the SATS communications system, the State engaged WWT to perform a feasibility study to determine whether these costs were reasonable and justified and to provide a renewed look at available alternative technologies required to ensure whether a different system could deliver comparable service at lower cost. WWT, in turn, partnered with North Slope Telecom, Inc., (NTSI) to perform this 'Feasibility Study'. NSTI is a 100% Alaskan owned and operated firm specializing in the design, construction, and maintenance of telecommunication systems in the remote arctic and sub-arctic and recognized throughout Alaska for the expertise in voice and data communications infrastructure via satellite, microwave, and fiber optics to urban and remote locations. NTSI's expertise, combined with WWT's proven project and consulting management methodologies, resulted in a comprehensive study that was transparent, unbiased, and verifiable.

Scope and Intent of Category *Subcontractors*	**SATS Staff Augmentation:** In further support of the SOA's radio and telecommunications requirements, WWT was engaged by the State of Alaska Telecommunications System (SATS) to provide labor in support of the wireless systems installation for vehicles and base stations and to assist the state in its compliance goals relative to the FCC's narrow-banding mandates. Beginning in July of 2008, WWT began providing qualified technical labor to augment the SOA SATS team in meeting these goals statewide. WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. North Slope Telecom, Inc.
Dates of Engagement	Start Date: SATS Staffing Engagement (July 2008), ALMR Feasibility Study (June 2011) Completion Date: SATS (ongoing), ALMR (August 2011)
Cost, schedule, and deliverables acceptance	WWT continues to provide staffing support to the SATS team. The ALMR Feasibility study was considered a huge success and used by ETS in Legislative hearings in Juneau to demonstrate the value of the ALMR platform. The SATS engagement's cost is $140,000 per year and the ALMR Feasibility Study's cost was $30,000.00 and a one-time fee. Duration of the ALMR project was 3 months.
Resources utilized	Qualified resources, as described in the RFP, utilized for the SATS project: • Entry • Professional • Expert • Project Manager

GCI: Managed Broadband Network Services

Company and contact Information	**GCI managed Broadband Services Group** Van Brollini - Technical Services Director vbrollini@gci.com 907-868-5852 2550 Denali St Anchorage, AK 99503
Brief Description of Work	GCI Managed Broadband Services provides network, voice, and video services for customers in several vertical markets around the state of Alaska and the Lower 48. WWT provides engineering resources to this department for design, deployment, and troubleshooting of these networks. With customer sites scattered over a large geographic area in all climates and terrains, WWT engineers in MBS work with many different WAN transports. These WAN transports include T1's, broadband wireless, fiber, metro Ethernet, microwave, and satellite.

Scope and Intent of Category	Using these transports, MBS creates voice and data networks for customers using equipment from Cisco, Juniper, Palo Alto, and others. The WWT team is responsible for planning, designing, implementing, troubleshooting, optimizing, and providing quality control of customer projects using any and all of the transport and equipment. WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Analysis, design, installation, modification of communication systems • Transports include T1, T3, Microwave, Satellite, Wireless broadband, Ethernet LAN, Metro Ethernet, Fiber Optic • Interoperability of TDM and WAN packet switching transport technologies.
Subcontractors	None
Dates of Engagement	Start Date: 2009 End Date: Staffing project, with recurring contracts still in progress
Cost, schedule, and deliverables acceptance	WWT Engineering staff has been re-engaged every six months for the past four years. Due to confidence in WWT resources, staffing has increased from one to five engineers in the last three years.
Resources utilized	Qualified resources, as described in the RFP, utilized for GCI's Managed Broadband Services is: • Expert • Professional • Associate • Project Manager

Pacific Gas & Electric (PG&E): IPICS Integration Project

Company and contact Information	Pacific Gas & Electric (PG&E) P.O. Box 7760 San Francisco, CA 94120-7760 Note: Please contact WWT Account Manager Tom Malech at tom.malech@wwt.com to facilitate direct contact with this customer
Brief Description of Work	Pacific Gas and Electric Company (PG&E), incorporated in California in 1905, is one of the largest combination natural gas and electric utilities in the United States. Based in San Francisco, the company is a subsidiary of PG&E Corporation. The company provides natural gas and electric service to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California. Currently, PG&E is in the fourth (4th) phase of a four phase Radio Refresh Project, which covers the implementation of a one hundred ten (110) site TAIT 1327 trunked radio system. There are approximately four thousand (4,000) radio subscriber units in one thousand twenty four (1,024) talk groups. PG&E also has a Cisco CUCM-based telephony system with nine thousand (9,000) users, and there are another fourteen thousand (14,000) cellular subscriber/units. Currently there is no integration among PG&E's radio, telephony and cellular systems. This lack of integration impacts the

	effectiveness of critical communications within PG&E. Accompanying the Radio Refresh Project, PG&E issued a Request for Proposal (RFP) for an ICCC platform for their Integrated Control Center Console Platform. The purpose of the RFP is to provide PG&E with a standardized and consolidated system that bridges the communications gap among telephony, radio and cellular users. WWT was awarded this contract in January, 2013. WWT's design is based on Cisco IP Interoperability and Collaboration System (IPICS) and IP Trade Turrets systems. The integration with existing production TAIT radio systems includes two (2) IPICS servers and Policy Engines in a High Availability (HA) pair, eight (8) HA pairs of Cisco Unified Media Service (UMS) systems, two (2) Cisco Inter-RF Subsystem Interface (ISSI) Gateways, Cisco Land Mobile Radio (LMR) Gateways with PG&E's existing 2921 routers in SFIOC, FFIOC and IPICS IP Phone clients spanning two (2) datacenters and requiring considerable work in the customer's LAN, WAN and MAN environments.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Planning, analysis, design, documentation • Interoperability of TDM and WAN packet switching transport technologies. • Radio over LAN, MAN, WAN
Subcontractors	Cisco, IP Trade
Dates of Engagement	Start Date: January 2013 Completion Date: July 2013 (est.)
Cost, schedule, and deliverables acceptance	This project is on schedule and within budget of $1.6M. Estimated completion is on track for July, 2013.
Resources utilized	Qualified resources, as described in the RFP, utilized for this project: • Entry • Associate • Professional • Expert • Project Manager

Category 3: Telephone Communications

University of Alaska, Anchorage: IPT Project

Company and contact Information	**University of Alaska, Anchorage (UAA)** Rich Whitney – Chief Information officer (retired) (907)360-7755 3211 Providence Dr. Anchorage, AK 99508
Brief Description of Work	WWT began work converting the University of Alaska, Anchorage campus Nortel telephone system to Cisco IP Telephony in 2006. Over time, the work has included system upgrades as well as enhanced services and expansion to include all outlying UAA-affiliated campuses. In conversion from Nortel to cisco, UAA purchased $3.7M in hardware and professional services from WWT to design, implement, train and provide Day 2 support services. WWT created designs for both network and telephony components. WWT then installed Cisco Core Switches, Cisco Distribution and edge Switches, Cisco Call manager, Cisco Unified Messaging, Cisco IPCC Express Call Center, Cisco Emergency Responder, and over 2000 Cisco IP telephone handsets. Additionally, the project required integration of over 3,000 analog devices into the new system using Cisco VG224 gateways. After initial build and install, UAA had WWT perform an upgrade of the system from the older windows-based Cisco IP Telephony system to newer Cisco Linux appliance-based systems for higher reliability and redundancy. This newer version also provided a pathway for new services needed by the university. UAA asked WWT to design and implement an enterprise-wide notification and broadcast system to the system, allowing announcements to reach all students, staff, and guests. This system included three major components: Singlewire Software Informacast, Singlewire Software IP Speakers, School Messenger Software, and Atlas Sound Zone Controllers for overhead paging and paging integration. WWT performed migrations of all community campuses in Kenai, Homer, Kodiak, and Valdez into the enterprise IP telephony system. This required physical site remediation, IP telephony design work to modify dial plans and site information requirements, QOS design for WAN and remote sites to accommodate voice/video services, and validation of the system to ensure that the new sites could be added quickly, easily, and without unnecessary outages for main campus devices. All remote sites were designed with SRST for survivable services in case of a WAN outage.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Large Scale AVVID design, develop, deploy, and support • Survivable Remote Site Telephony (SRST) • Bridging Technologies (SIP)

	• CallManager, Unity Voicemail, IP Contact Centers, IP ACD, IP IVR, Emergency Responder, Gateways, ATA devices, IP Telephones, VG224. • Softphones, Wireless IP Phones, 7900 series IP Phones • Quality of Service
Subcontractors	Hotwire
Dates of Engagement	Start Date: May 2006, start of Nortel conversion End Date: July 2011, sign off of campus migration
Cost, schedule, and deliverables acceptance	The initial cost of all phases of this project was: $5,005,000. The final cost for all phases of this project was: $5,107,000. The $102K variance was from additional cabling that UAA requested as WWT was providing facility remediation to the Community Campuses. Phases were completed according to UAA scheduling and were within budget.
Resources utilized	Qualified resources, as described in the RFP, utilized for this phase of the IPT deployment: • Expert • Professional • Associate • Entry • Project Manager

University of Alaska, Fairbanks: IPT Project

Company and contact Information	**University of Alaska, Fairbanks (UAF)** James Durkee Executive Director, OIT (907) 450-8315 505 S Chandalar Fairbanks, AK 99775
Brief Description of Work	WWT provided design, deployment, testing, and day 2 support services to replace the aging Nortel TDM PBX system for University of Alaska, Fairbanks with an up-to-date Cisco AVVID solution. This solution converted the entire 22-building campus to a new, enterprise-wide IP Voice core. The system comprises almost 2,000 handsets and 500 analog devices. The deployment also included the 7 UAF call centers, converted to Cisco Unified Contact Center Express (UCCX). In addition to the main campus, WWT converted the Bethel Kuskokwim campus to the system, allowing the community to receive on-campus phone service. Survivable Remote Site Telephony (SRST) allows the campus to continue operation in case of a WAN failure.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Large Scale AVVID design, develop, deploy, and support • Survivable Remote Site Telephony (SRST) • Bridging Technologies (SIP)

	• CallManager, Unity Voicemail, IP Contact Centers, IP ACD, IP IVR, Emergency Responder, Gateways, IP Telephones, VG224. • Softphones, 7900 series IP Phones
Subcontractors	None
Dates of Engagement	Start Date: April 2011 Completion Date: February 2013
Cost, schedule, and deliverables acceptance	These projects were state and university funds and there were multiple contracts that totaled $8M. Throughout the life of the contracts, UAF executed change orders and additional scopes of work to increase the scope of the program.
Resources utilized	Qualified resources, as described in the RFP, utilized for this IPT project: • Expert • Professional • Associate • Entry • Project Manager

State of Alaska: Enterprise VoIP Migration Project

Company and contact Information	**DOA, Enterprise Technology Services** John Monagle (907)465-5793 john.monagle@alaska.gov 333 Willoughby 5th floor Juneau, AK 99811
Brief Description of Work	In 2006, WWT began work with the SOA to migrate the core Nortel PBX systems in Anchorage, Juneau, and Fairbanks to the Cisco IPT platforms utilized today. WWT successfully moved the State of Alaska to a converged, enterprise wide IP telecommunications network. WWT worked closely with the State throughout all phases of the migration, accelerating the project's pace and schedule to minimize service disruptions. WWT delivered a scalable Cisco IP telephony core that can support more than 20,000 IP phones. WWT completely converted the State's 12,000 existing devices for voicemail, call control, call handling, Automatic Call Distribution (ACD), audio conferencing, E911 and Integrated Voice Response (IVR) integration in Anchorage, Juneau and Fairbanks to this new IP telephony core. The end to end project included but not limited to configuration of Cisco Call manager, Unity Voice Mail, Cisco IPCC Express IP contact centers, Cisco IOS routers and Analog gateways, Cisco ATA devices and all models of Cisco IP Telephones. The AVVID system was designed to provide site high availability services via Survivable Remote Site Telephony (SRST). Bridging technologies were designed and deployed using Session Initiation Protocol, and Cisco CUBE routers or Cisco Unified Border Element.

Scope and Intent of Category	Radio network interoperability is possible but not implemented via Cisco IPICS to connect with P25 radio networks, LTE, and satellite voice systems. WWT also provided extensive facility remediation as part of this project, including cabling, rack build-out, HVAC, power and UPS. Each site needed to be remediated before the network and telephony upgrades could occur and parallel teams of sub-contractors in Juneau, Anchorage and Fairbanks worked hard not to negatively affect the overall project completion date. WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Large Scale AVVID design, develop, deploy, and support • Survivable Remote Site Telephony (SRST) • Bridging Technologies (CUBE, SIP) • CallManager, Unity Voicemail, IP Contact Centers, IP ACD, IP IVR, Emergency Responder, Gateways, ATA devices, IP Telephones, VG224. • Softphones, Wireless IP Phones, 7900 series IP Phones
Subcontractors	Hotwire, Alcan, Blackbox, Layne Communications, Callies Consulting
Dates of Engagement	Start Date: May 2006 Completion Date: September 2008
Cost, schedule, and deliverables acceptance	This project was budgeted for three major phases. All phases came in on time and on budget: • **Phase 1**: 4,000 phones across 20 sites in Anchorage plus the IPT core build out in Anchorage, Juneau and Fairbanks to support 25,000 devices. Total cost for hardware and services: $10M • **Phase 2**: Detailed site surveys for remaining 100 sites plus additional core equipment. Total cost for hardware and services: $3M • **Phase 3**: Deployment of the remaining 100 sites to retire the TDM based system. Total cost for hardware and services: $12M The benefits of the new IPT system are universally appreciated by the executive leadership and end users at the SOA. This large scale enterprise project is determined to be a success by all measures: budget, schedule, and customer satisfaction.
Resources utilized	Qualified resources, as described in the RFP, utilized for this phase of the IPT deployment: • Expert • Professional • Associate • Entry • Project Manager

State of Missouri: Enterprise UC

Company and contact Information	**State of Missouri (SOM)** Office of Administration (OA) Information Technology Services Division (ITSD) Steve Siegler, Deputy Chief Information Officer Phone: (573) 751-1504 Email: steve.siegler@oa.mo.gov 301 W. High St. Room 270 PO Box 809 Jefferson City, MO 65102
Brief Description of Work	WWT holds two main contract vehicles – the SOM PC Prime Vendor Contract (13+ years) and the Cisco Networking Contract (4+ years). We are also a Western States Contracting Alliance (WSCA) value-added reseller in Missouri for HP, EMC, NetApp and Lexmark. WWT was selected by the SOM to deliver a multi-year statewide Unified Communications solution. Initially, the first phase of this project represented roughly 8,100 Cisco IP phones deployed at 58 locations in Jefferson City, MO. Phase 2 included approximately 7,800 Cisco IP Phones at multiple locations in three cities. This is a turnkey project that involves WWT performing the design, network/site readiness assessments, installation services, and training with Day 2 support monitoring the system. As of March 2013, WWT has deployed 14,000 phones during Phase 1 and Phase 2 and is working with the state to plan for Phase 3 of the project. The SOM has been actively leveraging their Cisco video teleconferencing solutions and deploying additional endpoints throughout the state. The total project is expected to exceed 30,000 phones. Technology Supported: • Unified Communications Manager • Unity Connection • Cisco Presence • Cisco Emergency Responder • Unified MeetingPlace • Unified Contact Center Express • Cisco TelePresence • Single Number Reach • RIM Mobility Voice Solution (MVS) for Blackberry • Call Recording • ISI Billing and Reporting Results: The State of Missouri now has an end-to-end solution that delivers enhanced citizen interaction, web conferencing, and mobile applications. Moreover, the entire network has been upgraded to accommodate future advanced technologies. WWT and Cisco provided a Cisco Unified Communications solution that is expected to yield a $30 million in saving over the next decade.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP.

	• Large Scale AVVID design, develop, deploy, and support • Survivable Remote Site Telephony (SRST) • CallManager, Unity Voicemail, IP Contact Centers, IP ACD, IP IVR, Emergency Responder, Gateways, ATA devices, IP Telephones, VG224. • Softphones, Wireless IP Phones, 7900 series IP Phones
Subcontractors	ADB – Phases 1 and 2; Planned for Phase 3 Ultreya Solutions Group – Phase 2
Dates of Engagement	Phase 1: Sept 2010 – June 2011 Phase 2: July 2011 – August 2012 Phase 3: Planning in progress; SOW in review.
Cost, schedule, and deliverables acceptance	WWT and Cisco partnered with the SOM CIO to explain how Cisco Unified Communications could deliver clean economic benefits to the state. WWT and Cisco also worked with the State Budget Director to conduct a Total Cost of Ownership (TCO) and Return on Investment (ROI) analysis on this project and used creative financing to help build the business case or the implementation and as a result, get the project funded over a multi-year period. Phase 1 (Cost = $12.4 M hardware, software, and services) was completed on time and on budget. Phase 2 (Cost = $7M hardware, software, and services) was completed ahead of schedule and under budget due to the State's decision to remove specific sites and include them in Phase 3. Deliverables were accepted upon project completion and sign off at each site.
Resources utilized	Qualified resources, as described in the RFP, utilized for this project: • Expert • Professional • Associate • Entry • Project Manager

Clorox: UC and AVVID Project

Company and contact Information	**Clorox** Ian Parker Phone: 925-425-6009 ian.parker@clorox.com 7208 Johnson Drive Pleasanton, CA 94588
Brief Description of Work	Clorox was looking to adopt a video conferencing environment to not only support their growing collaboration needs, but also integrate with their current UC deployment. WWT designed a video conferencing solution that provided immersive Cisco TelePresence System (CTS) 3010 endpoints, Tandberg single and dual screen Profile conference room systems, Tandberg EX90 desktop units, HD video bridging and secure firewall traversal. WWT also added Cisco video phones to Clorox's Cisco UC infrastructure and configured them to interoperate with VTC endpoints. WWT provided support for administrative training at several sites. This project was completed in 2010 and took 12 months WWT's migrated Clorox from their Avaya and Nortel systems to a Cisco Unified Communications platform. Clorox technical deployment supports more than

	5000 lines with approximately 5000 Cisco IP phones and 200 sites. WWT provided Cisco Unified Emergency Responder, CU Communication Manager, CU Contact Center Express, Cisco Unity Connections and Cisco CUBE Gateways. WWT has provided all installation services. The first phase of this project took approximately five months. WWT leveraged our low-level design methodology process. By having a detailed design WWT was able to mitigate technical issues. Clorox requested a product change during the second phase, and WWT was able to make these adjustments with very little impact to timeline. WWT provided daily managed support for Clorox's system for six months until they could get an internal managed services team trained. WWT engineers provided the training for Clorox internal management. WWT is currently migrating Clorox's corporate campus to new site with an additional 2000 users.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Large Scale AVVID design, develop, deploy, and support • Survivable Remote Site Telephony (SRST) • CallManager, Unity Voicemail, IP Contact Centers, IP ACD, Cisco Contact Center Express, Emergency Responder, Gateways, IP Telephones, VG224. • Softphones, 7900 series IP Phones • Cisco Telepresence, Tandberg CTS2010, Tandberg EX90 • Bridging Technologies (SIP, CUBE
Subcontractors	None
Dates of Engagement	Start Date: May 2010 End Date: December 2012
Cost, schedule, and deliverables acceptance	WWT received acceptance and project sign off in Dec. 2012 once both UC and Video project phases were complete. Cost of the project was approximately $910K. The project was completed on schedule.
Resources utilized	Qualified resources, as described in the RFP, utilized for project: • Entry • Associate • Professional • Expert • Project Manger

Category 4: Radio Communications

State of Alaska: Beaver Creek ALMR Site Development Project

Company and contact Information	**Enterprise Technology Services - SATS** Lee Santoro, PE 907-269-0808 lee.santoro@alaska.gov 2720 Pickett Place Fairbanks, AK 99709
Brief Description of Work	In August of 2009 WWT partnered with Peak Signals and the SOA to install a new Alaska Land Mobile Radio (ALMR) communications site for multi-agency use at an obsolete remote conventional radio site called Beaver Creek. The scope included updated land usage permits, FCC licensing, a commercial power line extension and a significant amount of remote logistics. The new site equipment included several racks of microwave radios, digitally trunked VHF repeaters, frequency combiners, battery banks, tower sections, antennas, a backup diesel generator and a communications shelter. Staff transported all equipment; including the ten thousand pound communications shelter six miles up the mountain utilizing specialized tracked vehicles. The project required a significant amount of expertise in the successful deployment of a complex P25 radio site. Both Motorola and Harris (now Aviat Networks) equipment were installed, aligned and integrated to bring this site efficiently into service in a very remote area of the State. The Beaver Creek ALMR site implementation required a broad range of complex microwave and trunked radio expertise for a successful deployment. This project included analysis, design, documentation, project leadership and implementation for a two-way radio and broadcast system.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Cisco, Motorola, Harris and Alcatel Technologies • TIA 102-P25 and Trunked Mobile Systems
Subcontractors	None
Dates of Engagement	Start Date: August 2009 Completion Date: October 2009
Cost, schedule, and deliverables acceptance	WWT received acceptance and project sign off in October 2009 when the new ALMR site came into service. Cost of the project was $250K. The project was completed on schedule in two months.
Resources utilized	Qualified resources, as described in the RFP, utilized for the ALMR project: • Associate • Professional • Expert • Project Manager

BP: Alaska Trunked Radio Project

Company and contact Information	**BP** Blaine Kosharek 900 E. Benson Anchorage, AK 99508
Brief Description of Work	WWT's partner GCI successfully implemented the harmony digital trunked radio service that BP relies on for communication among personnel and partners on the North Slope, through all phases of the design, implementation and maintenance cycles. The first phase of this project consisted of a planning and customer relations campaign titled the Discovery phase. This phase informed the user community of the upcoming upgrade as well as solicited feedback from the community on system needs and desired features. This campaign required considerable project and schedule management efforts to manage all stakeholders. The second phase of the project consisted of a system design for a trunked radio system that would work effectively despite the harsh arctic environment on the North Slope and the potential for degradation of service. This design used analysis of the existing system, results of the Discovery phase, and best practices to create a single, unified and effective trunked radio system for the BP enterprise. The third phase existed of implementation of the service, including equipment attainment, programming, installation and customer satisfaction, all while maintaining a perfect safety record. Once the Customer accepted the system, GCI's role transited to that of maintenance.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Trunked Radio Systems • Broadcast Systems • Telecommunications Development/Architecture/Systematization
Subcontractors	Any subcontractors that were used met and complied with all aspects of GCI and BPs HR and Safety policies
Dates of Engagement	Start Date: June 2005 Completion Date: May 2010
Cost, schedule, and deliverables acceptance	This project was completed on schedule and within the budget of with deliverable acceptance and signoff. This project was valued at close to $32M
Resources utilized	Qualified resources, as described in the RFP, utilized for this project: • Professional • Expert • Project Manager

BP: Gulf Coast Restoration Organization (GCRO)

Company and contact Information	BP Blaine Kosharek 900 E. Benson Anchorage, AK 99508
Brief Description of Work	In support of the Deepwater Horizon event (aka Macondo oil spill) in the Gulf of Mexico off of the coast of Louisiana, WWT's partner GCI was requested to provide the integrated 2-Way communication infrastructure needed to support the field staff and vessel traffic that was part of the GCRO. GCI responded quickly with a fully licensed, multi-agency coordinated solution. Our scope of work also entailed detailed engineered, negotiation with local land and tower owners, and then construction of this large integrated system which stretched along the coast from Pascagoula, Florida to Freeport Texas
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Telecommunications • Development/Architecture/Systematization
Subcontractors	Any subcontractors that were used met and complied with all aspects of GCI and BPs HR and Safety policies
Dates of Engagement	Start Date: July 2010 Completion Date: Feb. 2013.
Cost, schedule, and deliverables acceptance	Project budget for 2way telecom was completed successfully on time and within a budget in excess of $40M
Resources utilized	Qualified resources, as described in the RFP, utilized for this project: • Professional • Expert • Project Manager

Motorola: ALMR Implementation Project

Company name, address and client contact	**Motorola** 1301 East Algonquin Rd Schaumberg, IL 60195 POC Mike Ball Email: mike.ball@motorolasolutions.com Phone: (319) 750-0241

Brief Description of Work	North Slope Telecom Inc. (NSTI) successfully participated in the implementation of the Alaska Land Mobile Radio (ALMR) P25 digital trunked radio service that the State of Alaska relies on for communication among personnel and other government agencies throughout Alaska. NSTI was involved in all phases of the design, implementation, and maintenance cycles. NSTI used customer provided equipment and plans for the installation of over 20 sites throughout the state. This included mountain top sites, sites in marine environments and inside of multi-story office buildings. The work included both the remediation of existing infrastructure and construction of new infrastructure including buildings and towers. NSTI was responsible for the implementation of all special portions of this project. This included the design, construction, and acceptance of several air, land, and sea transportable modules that support the system in remote and disaster areas. It also included the design, installation and optimization of a leaking coaxial repeater system in a 2 ½ mile long train tunnel. NSTI has a continuing commitment to support deployments of the ALMR transportable systems and perform maintenance on the modules.
Scope and Intent of Category	Telecommunications Development/Architecture/Systematization
Subcontractors	Any subcontractors that were used met and complied with all aspects of NSTI and our client's HR and Safety policies. These included: GCI - Anchorage, Alaska Megawatt Electric - Anchorage, Alaska Alaska Tower Services (currently Alpine Tower & Technology) -Anchorage, Alaska
Dates of Engagement	Start Date: Dec 2004 Completion Date: July 2009
Cost, schedule, and deliverables acceptance	Estimated Value of NSTI portion of project: $9-$10 million Total Project Estimate: $150 million
Resources utilized	Qualified resources, as described in the RFP, utilized for the two phases of the telecommunications upgrade: NSTI employs and has all level of professionals and technicians available including • Systems Designers • Project Managers • RF and Electronics Technicians • Installation/Construction Technicians • Tower Technicians

ConocoPhillips: Alaska Radio Network

Company and contact Information	**ConocoPhillips, Alaska** 700 G Street Anchorage, Alaska 99501 POC: Kevin Sanchez Phone: (907) 265-6523, Kevin.M.Sanchez@conocophillips.com, Email: Steve Morris Steven.L.Morris@conocophillips.com Phone: (907) 265-1553
Brief Description of Work	WWT's partner North Slope Telecom Inc. (NSTI) has successfully completed multiple projects to narrow band radio networks for ConocoPhillips, Alaska (CPAI). This project has involved work efforts throughout Alaska. CPAI relies on these systems to provide communications to their employees in a heavy industrial environment. The primary system was installed on North Slope of Alaska and was a wide area MotoTurbo trunked radio system. NSTI was involved in all phases of the design, implementation, and optimization of the system. We identified all customer requirements and worked with the manufacturer to provide the appropriate equipment to meet them. We coordinated all logistics and acted as the primary customer interface with the provider. We remediated all sites to bring them up to code and meet the installation requirements of the manufacturer. Smaller local stand-alone analog and digital radio systems were installed in the Anchorage area and the Cook Inlet at a variety of industrial facilities ranging from refining to gas fields. Additionally we provided and installed systems in several office complexes. These were linked via RoIP. As with the MotoTubo system we designed, installed and have primary maintenance responsibility for these systems. NSTI employs multiple levels of engineers and technicians on this project, including: • Systems Designers • Project Managers • RF and Electronics Technicians • Installation/Construction Technicians • Tower Technicians
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Telecommunications • Development/Architecture/Systematization
Subcontractors	Alaska Tower Services (currently Alpine Tower & Technology)

Dates of Engagement	Start Date: Jan 2010 Completion Date: Project to complete Oct 2013
Cost, schedule, and deliverables acceptance	Estimated Value of NSTI portion of project: $15 million and is expected to be completed on time and within budget
Resources utilized	Qualified resources, as described in the RFP, utilized for the two phases of the telecommunications upgrade: • Associate • Professional • Expert • Project Manager

University of Alaska, Anchorage - Emergency Response Broadcast System

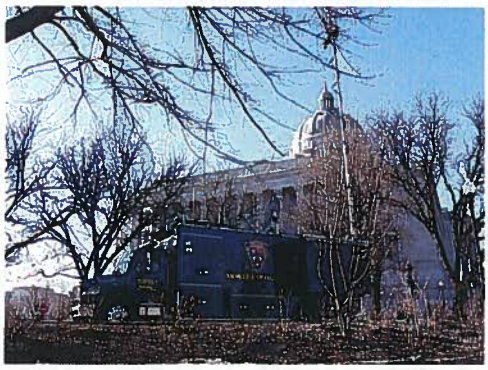
Company and contact Information	**University of Alaska Anchorage (UAA)** Pete Summers Dispatch Supervisor (907) 786-1589 3211 Providence Dr. Anchorage, AK 99508
Brief Description of Work	UAA contracted with WWT to design, procure, implement, document and support an Emergency Notification solution based on Cisco Emergency Responder and included Singlewire (IP based paging), Atlas Sound Zone Controllers (integration with analog paging system), and School Messenger (message broadcasting). UAA now has a state of the art Emergency Notification System that is run by the UAA Campus Police Department and can notify virtually everyone on campus very quickly to provide Emergency information and instructions. This makes the UAA campus a safer learning environment and keeps UAA in compliance with federal Emergency Notification mandates.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Public safety communications systems • Broadcast Systems
Subcontractors	None
Dates of Engagement	Start Date: March 2010 Completion Date: August 2010
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off in August 2010. Cost of the project was $120K. The project was completed on schedule in 5 Months.
Resources utilized	Qualified resources, as described in the RFP, utilized for the emergency notification project: • Professional • Project Manager

Madison County Sheriff's Office: Mobile Communications Initiative

Company and contact Information	**Madison County Sheriff's Office - Edwardsville, IL** Jeff Kochan, Network Administrator jskochan@co.madison.il.us 618-296-4711 405 Randle St Edwardsville, IL 62025
Brief Description of Work	This project was funded by a Homeland Security Buffer Zone Grant. Technology solutions provided by WWT include Cisco UC, Video Surveillance, Wireless/Mesh and IPICS. The resulting network emergency response trailer vehicle allows the County significantly improved capabilities to respond quickly and effectively to any emergency situation. The services for this project included: • Layer 1 for trailer, including cabling and custom rack for the equipment • Mesh Networking (Cisco 1524 APs and controller) • Video surveillance (PTZ cameras) • Cisco media servers • (3) mobile tripod units consisting of (1) 1524 AP, (1) PTZ camera, and (1) mobile battery unit to power the equipment on the mast. • Cisco IPICS • Cisco CME/CUE • Automated satellite dish with T1 and SIP trunk The customer now has a state of the art mobile communications trailer they can deploy anywhere, anytime with a full gamut of communication tools from VoIP telephony to the handset or radio allowing in/outbound calls, conferencing, radio communications via IPICS, surveillance cameras with DVR recording, wireless mesh with a satellite data T1.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Provide technical services that include analysis, design, documentation, project leadership and implementation for two-way radio and broadcast systems • Cisco, Motorola, Harris and Alcatel Technologies • Interoperability tools for these systems: Cisco IPICS, p25, LTE • Broadcast Systems
Subcontractors	Big Wireless
Dates of Engagement	Start Date: August 2009 Completion Date: February 2010
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off in February 2010. Cost of the project was approximately $140K. Due to some issues with OEM product fulfillment (portable batteries), the final completion of the project was delayed.

Resources utilized	Qualified resources, as described in the RFP, utilized for this project: • Entry • Associate • Professional • Project Manager

Sikeston Department of Public Safety: Cisco IPICS

Company and contact Information	**Sikeston Public Safety Department – Sikeston, IL** Chief Drew Juden, Public Safety Director 215 N. New Madrid Sikeston, MO 63801-4142 (573) 471-6200 drewj@sikeston.org
Brief Description of Work	The Sikeston Department of Public Safety spearheaded a statewide effort to implement an emergency response program which included a fleet of interoperable emergency response vehicles. The Mobile Command vehicle in the images below is one of two large vehicles. The Sikeston Department of Public Safety has one trailer and the Missouri State Highway Patrol (MSHP) has the other. There are also three smaller Suburban vehicles located throughout the State of Missouri in strategic cities. This project was funded by a Department of Homeland Security Grant.  WWT provided Cisco IPICS hardware and installation to help the Sikeston DPS: • Enhance safety, security and emergency response • Provide command, control, and communications capabilities for large scale emergency incidents
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Interoperability tools for these systems: Cisco IPICS • Provide technical services that include analysis, design, documentation, project leadership and implementation for two-way radio and broadcast systems
Subcontractors	None

Dates of Engagement	Start Date: Jan 2008 Completion Date: Feb 2008
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign-off in Feb 2012. Cost of product and services for the project was $183K. The project was completed on schedule in 8 weeks.
Resources utilized	Qualified resources, as described in the RFP, utilized for the Cisco IPICS project: • Expert • Project Manager

Category 5: Data Communications

Anchorage School District: Network Refresh

Company and contact Information	**Anchorage School District (ASD)** Mike Fleckenstein Executive Director of Information Technology (907) 742-4616 Fleckenstein_mike@asdk12.org 540 Dyea Ave. JBER, AK 99505
Brief Description of Work	After an RFP process, Anchorage School District selected WWT for a design build contract that refurbished existing core, WAN and augmented existing wireless coverage in schools to 106 sites ASD had 19 prioritized wireless and route/switch items to accomplish the106 site district wide refurbishment. The budget estimated that available funding would allow the completion of priorities 1–14. The WWT response met and in most cases exceeded each of the desired 19 items. Additionally, items were further purchased and completed under this project for: • Network Monitoring • Network Management • Network Access Control • Network Security WWT provided project management, analysis, recommendation, design, implementation, documentation, and training for refurbishment project that included network data communications using TCP/IP with routing (EIGRP, OSPF, and BGP), Quality of Service Shaping, Policing, & Queuing across the WAN and LAN. Cisco Hardware was that was included in this project: • Cisco Catalyst 6500 Core • Cisco 7200 Routers • Cisco 2800 Routers (next generation 2600) • Cisco 3600 Series • Cisco Catalyst 4500 Access • Cisco Catalyst 2900 Access • Cisco 4400 Wireless LAN Controller

	• Cisco 1100 and 1200 series access points • Cisco 5585 ASA Firewalls
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Planning, cost benefit, analysis, assessment, design, implementation, documentation, and training for LAN, MAN, and WAN network deployment using TCP/IP and routing protocols across the Cisco suite of routers and switches. • Quality of Service design and configuration to support AVVID framework • Cisco Technologies • Security Technologies: Network, Endpoint, Application, Management, Etc. • Router/Switch configuration/BGP
Subcontractors	Hotwire
Dates of Engagement	Start Date: April 2010 Completion Date: October 2011
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off in October, 2011. Cost of services and hardware/software for the project was $11M. The project was completed on schedule in 18 months.
Resources utilized	Qualified resources, as described in the RFP, utilized for the network refresh upgrade project: • Entry • Associate • Professional • Expert • Project Manager

State of Alaska: Frontier Building Remediation Project

Company and contact Information	**DOA, Enterprise Technology Services** Carl Hereford 5900 East Tudor Road Anchorage, AK 99507
Brief Description of Work	In 2008, WWT provided upgrades for the Frontier building encompassing: Access Control & Physical security installation, Backbone Fiber installations, MDF and IDF creation and upgrades, Horizontal network cabling, Rack, Power, UPS installations, Network hardware refresh and IPT handset discovery & deployment.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Cisco Technologies • Security Technologies: Physical • Router/Switch configuration/BGP
Subcontractors	Redi Electric

Dates of Engagement	Start Date: April 2008 Completion Date: September 2008
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off in October, 2008. Cost of the project was $1.2M. The project was completed on schedule in six months.
Resources utilized	Qualified resources, as described in the RFP, utilized for the Frontier Building Remediation Project: • Entry • Associate • Professional • Project Manager

State of Alaska: Juneau Microwave Upgrade

Company and contact Information	**DOA, Enterprise Technology Services - SATS** Dean Strid, PE 907-269-5764 dean.strid@alaska.gov 5900 E. Tudor Rd Anchorage, AK 99507
Brief Description of Work	In May of 2012 WWT partner Peak Signals began work with the SOA to upgrade the existing microwave Municipal Area Network (MAN) backbone in Juneau. The project scope consisted of : • Assisted in the original design and planning • Replaced four hops of obsolete 18Ghz TDM based Alcatel microwave with new 11Ghz IP/MPLS Harris (Aviat Networks) microwave radios. • Installed Alcatel 7705 Service Aggregation Routers in conjunction with the legacy non-replaced TDM microwave radios. This aggregation of traditional TDM circuits has allowed the State to cost-effectively leverage the majority of their existing microwave in Juneau by also being able to utilize the newer IP/MPLS protocol. The Juneau Public Safety community is supported by four separate Alaska Land Mobile Radio (ALMR) sites. This installation of new microwave radios combined with the service aggregation routers provides for a migration from a circuit switched network to a packet switched network to support the ALMR sites. This project provided design, planning, and implementation of a migration from a circuit switched network to a packet switched network.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Planning, analysis, assessment, design, and implementation for radio services over a packet switched network • Alaska Land Mobile Radio (ALMR) migration of circuit switched network to packet switched network

Subcontractors	None
Dates of Engagement	Start Date: May 2012 Completion Date: February 2013
Cost, schedule, and deliverables acceptance	Peak Signals received acceptance and project sign off in February 2013 when the equipment was installed. Cost of the project was approximately $150K. Duration of the project was approximately nine months.
Resources utilized	Qualified resources, as described in the RFP, utilized for the Juneau Microwave Project: • Associate • Professional • Expert • Project Manager

State of Alaska: Identity Services Engine (ISE) Deployment

Company and contact Information	**DOA, Enterprise Technology Services** Jay Druyvestien (907) 465-2060 jay.druyvestein@alaska.gov 333 Willoughby Ave. 5th floor Juneau, Ak 99811
Brief Description of Work	In July of 2002 WWT partnered with the SOA to plan, design, and implement an SOA Enterprise Identity Services Engine (ISE) Security solution. The ISE Program scope of work encompassed six security project initiatives, which included implementation of the ISE core in Anchorage and Juneau, ISE Policies and Configuration (NAC), ISE NCS Configuration, ISE VPN Configuration, Wireless controller Implementation along with SOB Wireless and remediation. Extensive technical analysis and troubleshooting were conducted as required. The Scope included Program Manager/Project Manager oversight to ensure timely delivery of project deliverables and final documentation. WWT PM coordinated and managed Subcontractor, Alcan Electric to complete the SOB Remediation work. The program included planning, analysis, design, program/project management, documentation; installation, implementation, trouble-shooting and training related to the implementation of the Enterprise ISE projects. These project provided end-point security for wireless and mobile devices within the SOA LAN infrastructure. It also includes provisions for extending end-point security to wired devices in the infrastructure. The ISE technology design and implementation required the expertise of specialized certifications for successful deployment.

Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Planning, analysis, assessment, design, and implementation for wireless and secure identity security services across the Cisco suite of products • Cisco Technologies • Security Technologies: Network, Endpoint, Application, Management, Etc. • Router/Switch configuration/BGP
Subcontractors	Alcan Electric
Dates of Engagement	Start Date: July 2012 Completion Date: April 2013
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off for the Discovery Phase in May, 2012. Cost of services for the project was $100K. The project was completed on schedule in six months.
Resources utilized	Qualified resources, as described in the RFP, utilized for this project • Associate • Professional • Expert • Project Manager

GCI: Turbo Zone Broadband

Company and contact Information	**GCI** Mike Carpenter - Product Manager (907) 868-6740 mcarpenter@gci.com 2550 Denali Street, Suite 1000 Anchorage, AK 99503
Brief Description of Work	Since GCI launched Internet services in 1996, facilities-based mobile wireless services in 2007, and LTE in late 2012, the Company also decided to install Public Broadband Wi-Fi, in what are called TurboZone locations. To date, GCI has successfully implemented over 1,489 TurboZones throughout Alaska – the largest Public Broadband Wi-Fi deployment by any provider in the state. GCI started deploying TurboZone Public Broadband Access Points in late 2011, and the goal is to install Access Points in any public area where five or more people congregate five or more minutes, and there are GCI facilities. The GCI TurboZone network was built on a state-of-the-art Cisco Wi-Fi Core, with the latest Access Point technologies. GCI provides two SSIDs to the property owner, one blazing fast TurboZone-branded SSID for GCI Smartphone customers and one open SSID for all users. There is no cost for the property owner. Major deployments are within the Sullivan Arena, Airports, fifteen State/Court System offices, Airports, Convention Centers, Hospitals, Shopping Malls, restaurants, coffee shops, and other public areas, including outdoor deployment in Parks and Recreation areas.

Scope and Intent of Category *Subcontractors*	The locations are concentrated in South Central, Southeast, and Interior Alaska, but include locations in Deadhorse and on Kodiak Island. For a more detailed listing of sites, please see http://www.gci.com/wireless/turbozone/locations WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Planning, analysis, assessment, design, and implementation of Broadband networks • Cisco Technologies • Public Broadband Alaska Tech Services (deploying APs)
Dates of Engagement	Start Date: 4th Quarter 2011 Completion Date: Ongoing Project
Cost, schedule, and deliverables acceptance	This project enhances the user's experience and adds value to the owner's property. GCI provides all the support, and brands the open Wi-Fi SSID with the business' brand if desired. There is no cost to the property owner. Wireless data usage was free to GCI Smartphone users until May 31, 2013 and Commercial customers usually get a 4GB data usage bonus. This does not affect the State of Alaska, as its current GCI Smartphone plans include unlimited data, whether transport is via TurboZone or the cellular network. GCI reached its internal goal of 1,000 Access Points within the timeframe set by our executive team.
Resources utilized	Qualified resources, as described in the RFP, utilized for this project: • Entry • Associate • Professional • Expert • Project Manager

Alabama National Guard: Cisco Identity Services Engine (ISE) Deployment

Company and contact Information	**Alabama National Guard** Darrin Gibson (334) 213-7551 1720 Congressman Dickinson Drive Montgomery, AL 36109 USA
Brief Description of Work	Alabama National Guard maintains 141 armories in 129 communities throughout the State of Alabama. Secure access to wired and wireless networks throughout the armories is a priority mission for the Guard.

Scope and Intent of Category	In July of 2012, WWT designed and deployed a pilot deployment of Cisco Identity Services Engine infrastructure for the Alabama National Guard. WWT installed ISE for wired, wireless, and VPN network use cases. WWT provided a distributed ISE infrastructure that consisted of two Policy Admin Nodes, two Monitoring Nodes and a cluster of Policy Service nodes licensed for 5,000 endpoints. ISE was configured to handle profiling, guest access and posture assessments utilizing both Basic and Advanced licensing features. The deployment included Active Directory integration as well as compatibility with CAC Authentication Cards. WWT configured ISE to work with Cisco 3560, 3750, 4500 and 6500 Catalyst series switches as well as Cisco 5508 wireless LAN controllers and Cisco ASA 5500 series firewalls. WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Cisco Technologies • Security Technologies: Network, Endpoint, Application, Management, Etc. • Router/Switch configuration/BGP
Subcontractors	None
Dates of Engagement	Start Date: July 2012 Completion Date: August 2012
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off in August 2012. Cost of services for the project was $63K. The project was completed on schedule in 8 weeks.
Resources utilized	Qualified resources, as described in the RFP, utilized for this project: • Expert • Project Manager

Pacific Gas and Electric (PG&E): Data Center Modernization Project

Company and contact Information	Pacific Gas and Electric (PG&E) Pacific Gas & Electric (PG&E) P.O. Box 7760 San Francisco, CA 94120-7760 Note: Please contact WWT Account Manager Tom Malech at tom.malech@wwt.com to facilitate direct contact with this customer
Brief Description of Work	PG&E has launched a Data Center Modernization (DCM) project to upgrade its two existing Data Centers and build out a new Data Center. The two existing Data Centers are located in San Francisco (SF) and Fairfield (FF), California. PG&E issued an RFQ F009-12JSS for the network build-out at the three (3) Data Centers including the new Rancho Cordova location. In addition to procurement of network equipment, the RFQ requests for network design, configuration, implementation, and testing services at these Data Centers. The services cover Data Center LAN, MPLS core, Internet connections, firewalls, IDS/IPS, and global and local load balancers.

	<u>Local Area Network (LAN)</u> There will be two physical LANs each at the new Data Center and FF Data Center: production LAN and IBN. The production LAN has a pair of Nexus 7010s as core, with Nexus 5548, Nexus 2232, Nexus 2248, and Catalyst 6513 at distribution and access layers. The IBN has a pair of Nexus 5548 as cores; Nexus 5548 and Nexus 2248 at access layer. The San Francisco Data Center LAN will be upgraded with redundancy and additional capacity. <u>Multiprotocol Label Switching (MPLS) Core</u> PG&E owns its ONS network. PG&E is building its own MPLS network. A pair of ASR9006s at each of the three Data Centers will act as P Routers. The new Data Center and FF Data Center will each have an ASR 1002 as Router Reflector (RR) to managing the BGP Routing and a pair ASR1004s as PE Routers for WAN aggregation. <u>Internet</u> For the new Data Center and FF Data Center, each will have a pair of Catalyst 6513s as the Internet Gateways. The Catalyst 6513s will have ASA and ACE modules as Internet firewalls and load balancers. A pair of IPS4270s will connect to the Catalyst 6513s for Internet IDS/IPS functionalities. <u>Firewalls and Internal IDS</u> Apart from the ASA modules in Catalyst 6513 Internet Gateways, there will be two pairs of HA ASA5585s at the new Data Center and FF Data Center. The two pairs of ASA5585s will sandwich the internal load balancers on a pair of Catalyst 6506 with ACE modules. There will be another pair of ASA5585 with IDS modules for internal IDS/IPS needs. <u>Load Balancers</u> In addition to the ACE modules in Internet Gateway Catalyst 6513s and in Catalyst 6506s as the internal load balancers, each Data Center will have one GSS4492 for global load balancing functionalities. This was changed to now be A-10 load balancers to be integrated with the Cisco 6513's and provided by PGE. <u>Security Area Network (SAN)</u> Although Nexus platforms have built-in FCoE and SAN switching capabilities, efforts related to SAN and storage design, configuration, implementation, and testing are outside of the scope of this project. WWT will work with PG&E resources and Cisco Advanced Service (AS) team to carry out the procurement, design, configuration, implementation, and testing of the network infrastructure portion of the DCM project.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Cisco Technologies • Security Technologies: Physical, Network, Endpoint, Application, Management, Etc.

	• Router/Switch Configuration/BGP
Subcontractors	None
Dates of Engagement	Start Date: May 2012 Completion Date: June 2013 (expected)
Cost, schedule, and deliverables acceptance	This project is ongoing with deliverables acceptance expected in late June 2013. To date the project has been on schedule and within budget. Final cost of the project is expected to exceed $15M.
Resources utilized	Qualified resources, as described in the RFP, utilized for this project

Category 6: Data Center Solutions

State of Alaska, ETS: Cisco Nexus & UCS Deployment

Company and contact Information	**DOA, Enterprise Technology Services** Corey Kos (907)269-2028 corey.kos@alaska.gov 619 Ship Creek Ave, Ste 232 Anchorage, AK 99501-1667
Brief Description of Work	WWT planned, design, implemented, and provided training for a datacenter deployment of Cisco Nexus DC Switching, Cisco MDS Fiber Channel, and Unified Compute (UCS) elements in the three major datacenters in Anchorage, Juneau, and Fairbanks. Each datacenter deployment included a network element with a pair of redundant Cisco Nexus 7010 datacenter core switches configured in a Virtual Port Channel Peer group, a fiber channel element with a pair of redundant MDS 9148 fiber channel switches, and a unified compute element with Cisco UCS that includes a pair of redundant Fabric Interconnects and blade server chassis with redundant fabric I/O modules. The initial deployment included the following hardware: • 6 Cisco Nexus 7010 datacenter core switches • 6 Cisco MDS 9148 fiber channel switches • 3 Cisco 5108 Blade Chassis with 2 each 2104 IOM Modules • 10 Cisco B250 M2 full height blade servers The new infrastructure was configured so that it could be integrated into the existing NetApp storage and VMware environments. Utilizing fiber channel boot from SAN, iSCSI and NFS storage for the virtualization environment. As a result the aligned effort, the SOA has a registered private cloud FlexPod in each of the three datacenters in Anchorage, Juneau, and Fairbanks. Since initial configuration the environment has significantly grown and become a key element in the ETS service offering to internal customers.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Provide data network services that include planning, analysis, design, programming, documentation, installation, implementation, "trouble-shooting" and training related to LAN and/or WAN. Services shall be performed by personnel with recent experience performing network activities of increasing complexity. These include but are not limited to; Datacenter Networking, Cisco Unified Computing System (UCS), Private Cloud (w/Flex pod) Inc., VMware, Unified Compute, Storage Area Network connectivity.
Subcontractors	Business Technology Architects

Dates of Engagement	Start Date: March 2011 Completion Date: August 2011
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off in August, 2011. Cost of services and hardware/software for the project was $1.5M. Due to unexpected variables with failed hardware, logistics, and delivery, the project duration was longer than expected, however WWT still delivered the services without change orders and within the original budget.
Resources utilized	Qualified resources, as described in the RFP, utilized for the two phases of the telecommunications upgrade: • Professional • Expert • Project Manager

State of Alaska, Dept. of Natural Resources: Datacenter FlexPod Deployment

Company and contact Information	**State of Alaska, Dept. of Natural Resources** Todd Johnson (907)268-8831 todd.johnson@alaska.gov 550 W. 7th Ave. Anchorage, AK 99501
Brief Description of Work	WWT replaced DNR's virtualized data center environment and provided a scalable solution to eventually replace their Oracle environment as well. WWT handled complete design, documentation, installation, implementation of the unified compute and storage area network. DNR's existing 1GbE Dell/NetApp environment was transformed into a UCS, Nexus, VMware, NetApp - FlexPod and migrated their virtual environment over to the FlexPod platform. WWT professional services implemented the UCS, Nexus and expanded the NetApp capabilities to include 10GbE. The new infrastructure was installed and tested for full fault tolerant redundancy. WWT is currently engaged with DNR providing upgrades for their FlexPod to enable greater capacity for current and future compute, storage and data center networking needs.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Provide data network services that include planning, analysis, design, programming, documentation, installation, implementation, "trouble-shooting" and training related to LAN and/or WAN. Services shall be performed by personnel with recent experience performing network activities of increasing complexity. These include but are not limited to; Datacenter Networking, Cisco Unified Computing System (UCS), Private Cloud (w/Flex pod) Inc., NetApp, Dell, Virtualization (Server, VDI, Application), VMware, Unified Compute, Storage Area Networks – NetApp, Storage Architectures – NetApp, Disaster Recovery, Datacenter plant facilities (environmentals).
Subcontractors	None

Dates of Engagement	Start Date: June 2011 Completion Date: June 2011
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off in June, 2011. Cost of services and hardware/software for the project was $173K. The project was completed on schedule in 2 weeks.
Resources utilized	Qualified resources, as described in the RFP, utilized for the services under this project: • Professional • Expert • Project Manager

Factory Express: Cloud Infrastructure Integration and Deployment

Company and contact Information	**Factory Express** Due to confidential nature of this project, WWT cannot provide any end-customer contact information. For questions, please contact WWT Program Director - Steve Fuchs at (314)919-1687 or steve.fuchs@wwt.com.
Brief Description of Work	WWT Advanced Solutions group (WWTAS) helped a U.S. Government Agency consolidate multiple data centers into a cloud infrastructure by leveraging their technical expertise, strategic partnerships and Integration Technology Center to deliver six (6) FlexPods and 78 custom racks within 45 days. In this unique program, in which the federal government chose to utilize a commercial enterprise for both integration services and delivery, WWTAS instituted the Factory Express Initiative to deliver 78 custom racks and six (6) complete cloud systems with FlexPod® Data Center Architecture in time to meet the client's aggressive deadline. The WWTAS team is comprised of specialists in systems, virtualization, storage, testing, network engineering and database development with vast experience in high-availability clustering and enterprise systems management. Over 30 resources spent two months in the warehouse working 12-hour days, seven days a week to meet the client's aggressive timeline. Over the course of the project, WWT's OEM-certified professional services team used video conferencing to work directly with the remote customer to design custom assemblies, configurations, integrations, cabling and testing schematics and provide day-to-day project updates. As all of the FlexPods required configuration, custom cabling, testing, staging and shipping, WWTAS utilized WWT's Integration Technology Center (ITC) in St. Louis, Missouri. WWTAS immediately established 30,000 sq. ft. of dedicated space for the program comprised of 17,500 sq. ft. for inbound material staging and cabinet builds, 12,500 sq. ft. for staging, storage and crating, and 2,500 sq. ft. for testing. A transformer with 380 amps and 208 voltage was added to support increased power demands. Within this optimized setting, WWTAS simultaneously assembled, configured, tested and asset tagged all 78 racks so that they could be completed and delivered to the client at once.

	Longstanding partnerships with NetApp and Cisco Systems helped streamline product procurement for the FlexPod components, including NetApp unified storage systems, Cisco Unified Computing System servers and Cisco Nexus fabric. WWTAS also worked hand-in-hand with NetApp pre-sales engineers to validate all configurations, establish pricing and create a bill of materials (BOM). NetApp Professional Services representatives joined WWTAS on site during the configuration period, during which WWTAS experts validated firmware and BIOS levels on all hardware, provided custom cabling and labeling, and leveraged an automated testing program to confirm port-to-port connectivity and performance. Working together as true partners, the WWTAS and NetApp teams conducted troubleshooting to address any problems they encountered along the way.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Provide data network services that include planning, analysis, design, programming, documentation, installation, implementation. • Datacenter Networking, Cisco Unified Computing System (UCS), Private Cloud (w/Flex pod) Inc., NetApp • Virtualization (Server, VDI, Application), Citrix, VMware, Unified Compute, Storage Area Networks – NetApp, Storage Architectures – NetApp
Subcontractors	NetApp Professional Services
Dates of Engagement	Start Date: November 2012 Completion Date: February 2013 Note: WWT is in discussions with the customer regarding expansion of this engagement
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off for the project in November 2012. Total cost of the project for initial contract was approximately $15M. The project was completed on schedule in three months.
Resources utilized	Qualified resources, as described in the RFP, utilized for the two phases of the telecommunications upgrade: • Professional • Expert • Project Manager

Mercy Health: Data Center Server Virtualization and Consolidation Project

Company and contact Information	**Mercy Health** Rick Counts Director of System Solutions Office: (314) 364-3519 Richard.Counts@Mercy.Net 3637 S. Geyer St. Louis, MO 63127

Brief Description of Work	The Sisters of Mercy Health System (Mercy) was established in 1986 to serve as the parent corporation of a variety of health care facilities and 26 hospitals in seven states (MO, AR, KS, OK, TX, MS, LA). WWT Virtualization Architects analyzed VMware capacity planning data across 2,200 physical servers to assist in designing a virtual environment encompassing server compute, storage and networking hardware during a data center consolidation initiative. In addition, a detailed P2V plan and design was developed specific to Mercy environment which allowed an accelerated migration path of more than 1,250 physical work loads into the newly deployed VMware virtual environment based on a Service Oriented Infrastructure. This accelerated migration path allowed Mercy to consolidate all workloads in less than four months running at an average of 75 P2V's per week. Over 1,250+ P2V migrations were completed in less than four months. The P2V run rate averaged over 75 migrations a week allowing Mercy to quickly adopt almost a complete virtual environment. Power utilization within the data center has dropped significantly. Centralized compute infrastructure along with 10Gb network has increased utilization, performance, and allowed for future growth as demand needs excel. Compute – 70+ Cisco Blades; Total Storage – 2.5PBs EMC and NetApp; Network – Cisco Nexus 10GbE, Virtualization – 1,000+ VMs
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Provide data network services that include planning, analysis, design, programming, documentation, installation, and implementation • Datacenter Networking, Cisco Unified Computing System (UCS) • Virtualization (Server, VDI, Application), Citrix, VMware, Unified Compute, Storage Area Networks – NetApp, Storage Architectures – NetApp
Subcontractors	None
Dates of Engagement	Start Date: June 2010 Completion Date: December 2010
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off in 12/2010. Cost of services for the project was $405k. The project was completed on schedule in 12/2010.
Resources utilized	Qualified resources, as described in the RFP, utilized for the services under this project: • Entry • Associate • Professional • Expert • Project Manager

University of Arizona: Datacenter Project

Company and contact Information	**University of Arizona** Adam Michel, Systems Programmer adam.michel@arizona.edu (520) 626-2189 1077 N Highland Tucson, Arizona 85721
Brief Description of Work	WWT created a robust virtual environment using primary and back-up UCS servers to meet the customer's demanding expectations for a fully available redundant system. To augment Cisco's UCS platform, WWT deployed EMC's easily-scalable unified storage architecture to enable information access within, between and across systems. VMware "hypervisor" software, in addition to other applications, was implemented to manage the entire virtualized platform.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Provide data network services that include planning, analysis, design, programming, documentation, installation, implementation, "trouble-shooting" and training related to LAN and/or WAN. • Services shall be performed by personnel with recent experience performing network activities of increasing complexity. • Technologies include Data Center Networking, Cisco Unified Computing System (UCS), Virtualization, VMware, NetApp, Storage Area Networks, Storage Architectures, Disaster Recovery
Subcontractors	None
Dates of Engagement	Start Date: March 2011 Completion Date: April 2011
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off in April 2011. Cost of services for the project was $25K. The project was completed on schedule in four weeks.
Resources utilized	Qualified resources, as described in the RFP, utilized for the two phases of the telecommunications upgrade: • Entry • Associate • Professional • Project Manager

Category 7: Local Area Network

State of Alaska: JDC Cooling Project

Company and contact Information	**DOA, Enterprise Technology Services** Chris White Data Processing Mgr III (907)465-5755 christopher.white@alaska.gov 333 Willoughby 5th Floor Juneau, AK 99811
Brief Description of Work	In 2009, WWT began work with the SOA to analyze, plan, design, and implement a comprehensive cooling solution for their primary datacenter serving southeast Alaska and located in Juneau, AK. This was a multi-phased project aimed at providing scalability, reliability, redundancy, energy efficiency, noise reduction and operating costs savings while providing the SOA with a better operating environment and more effective utilization of their existing raised floor space. This project was primarily a facility infrastructure initiative encompassing structural and seismic engineering, electrical power design, building systems such as fire alarm, fire suppression, access control, control wiring, UPS Power upgrades and HVAC. WWT worked closely with the State throughout all phases of the project, accelerating the project's pace and schedule to minimize service disruptions. The installation and implementation phases required mobilization of materials, staff and equipment as well as site preparation, work schedule development and activity coordination for all personnel, including contractors. Mechanical work included the installation of the new chiller, CRAC cooling units, ACU's, condensation lines, air separators and Metraflex Metraloops. The electrical work included the installation of new High Voltage Circuit breakers, parallel conduits, control wiring, and a completely new power Distribution System. Additional systems installed or upgrade included Fire Alarm and suppression systems, Copper and Fiber Optic backbone and Data Center Distribution systems, duct sensors and water detection systems, as well as access control and Physical security systems upgrades. Structural responsibilities included the installation of the new chiller platform, excavation of bedrock and the installation of concrete foundations, structural steel, floor grading and access doors. WWT also designed and installed the sound barrier and performed field measurement tests between equipment and the neighboring property lines. Close coordination was needed between all disciplines to minimize workflow disruption while accomplishing the goals stated above. This project also demonstrated WWT's ability to bring to bear the experience needed to achieve the desired end result. Expertise required for this project was wide ranging including expertise in the following agencies, associations and codes: (not all inclusive) ASHRAE (American Society of Heating, Refrigeration and Air Conditioning), NFPA (National Fire Protection Association), BICSI

	(Building Industry Consulting Service International), ICC (Internal ICC (International Code Council), BOCA (Building Officials and Code Administrators), IBC 2006 (International Building Code), UPC 2006 (Uniform Plumbing Code), IMC 2006 (International Mechanical Code), ANSI C2-2002 (American National Standards Institute), IFC2006, NEC 2005 (National Electric Code), OSHA (Occupational Safety Hazards Administration) and ANSI/TIA/EIA 942 Data Center Design Guidelines and Structured Cabling Standards
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Planning, analysis, design, programming, documentation, installation, implementation, trouble-shooting, and training related to LAN and WAN efforts • Facility Infrastructure (EIA/TIA 942, Uptime Institute, BISCI etc.) • Electrical design – power distribution inc. shore, generators, ups and other power components • HVAC systems • Seismic/ISO Base • Physical Security – access control, camera & management systems • Building systems and wiring: ANSI/NECA/BICSI 568-2006 • Fire Alarm and Suppression systems
Subcontractors	Behrends, Alcan, ACC, RSA, Haight, Sparling, Allen, General, PND
Dates of Engagement	Start Date: May 2009 Completion Date: August 2010
Cost, schedule, and deliverables acceptance	WWT received test acceptance and project sign off in August, 2010. Cost of the project was $2.2 million. The project was completed on schedule in 13 months.
Resources utilized	Qualified resources, as described in the RFP, utilized for the services under this project: • Entry • Associate • Professional • Expert • Project Manager

University of Alaska, Fairbanks: Building Remediation Project

Company and contact Information	**University of Alaska – Fairbanks** James Durkee Executive Director, Technology Oversight jrdurkee@alaska.edu (907) 450-8315 105G Butrovich Building

Brief Description of Work	In April of 2011 WWT partnered with the University of Alaska Fairbanks to plan, design, and implement Cat5E cabling, racks, power, and fiber infrastructure to support a Cisco VoIP solution implementation that WWT was also performing to replace an aging PBX. The UAF campus cabling, wiring and power program scope of work encompassed 16 buildings on the Fairbanks main campus and the Bethel campus. The wiring and remediation of each building included the following: • Re-termination of split pairs, • New Cat5E cabling from patch panel to customer end points • New patch panels and removal of old patch panels • Horizontal and vertical cable management • Installation and grounding of 2 post racks • Removal of existing cabling and fiber • Fiber connectivity with single-mode and multi-mode fiber • Installation of 120 volt, 30 amp dedicated circuit for uninterruptible power supply (UPS) The Scope included Program Manager/Project Manager oversight to ensure timely delivery of project deliverables and final documentation. WWT PM coordinated and managed Subcontractor, Hotwire Communications and Electric Inc. Remediation work. The program included planning, analysis, design, program/project management, documentation; installation, implementation, trouble-shooting and training related to the implementation of the Enterprise ISE projects The wiring design and implementation required the expertise of a BICSI Registered Communications Distribution Designer (RCDD) and PMI certified Project Management Professional.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. WWT performed services during this project, which apply to the Category and Technologies, and Services of Interest from Category 7 of the RFP. • Planning, analysis, design, programming, documentation, installation, implementation, trouble-shooting, and training related to LAN and WAN efforts • Facility Infrastructure ((EIA/TIA 942, Uptime Institute, BISCI etc.) • Electrical design – power distribution inc. shore, generators, ups and other power components • Seismic/ISO Base • Communication closet construction – main and intermediate distribution frame rooms • Building systems & wiring: ANSI/NECA/BICSI 568-2006
Subcontractors	Hotwire Communications, Electric Inc.

Dates of Engagement	First Project Start Date: April 19, 2011 Latest Project Finish Date: May 10, 2013
Cost, schedule, and deliverables acceptance	WWT receives project sign-off by building and the most recent was on May 10, 2013. Approximate Cabling Infrastructure Program Cost: $2,605,000 Duration to Date: 26 Months
Resources utilized	Qualified resources, as described in the RFP, utilized for the services under this project: • Associate • Professional • Expert • Project Manager

State of Alaska: UPS Maintenance Program

Company and contact Information	**DOA, Enterprise Technology Services** **John Monagle** (907)465-5793 john.monagle@alaska.gov 333 Willoughby 5th floor Juneau, AK 99811
Brief Description of Work	In 2008 WWT signed a five-year contract with the SOA to provide 24 X 7 X 365 SNMP monitoring for the eighty UPS's that support all of the State's WWT-installed IPT handsets and WWT-installed statewide WAN. This monitoring encompassed temperature, battery health, power outages and other environmental variables and provided the State with an industry-leading four-hour response time SLA for the replacement of failed batteries and a guaranteed 30-minute "up-time" for each UPS in the event of a power failure. Additionally, WWT also conducted annual physical health checks on every UPS covered under this contract and maintained sufficient inventory in state to meet the demands of the contract. In the contract's five-year span, WWT worked with the SOA to add an additional 122 UPS's to the State environment to support the expansion of the SOA voice platform, several of which required new switch closet construction. These remediation projects which supported the SOA expansion, and added UPSs to the contract, included facility infrastructure, structural engineering, electrical design, building systems and wiring. WWT worked closely with the State throughout all phases of the project, accelerating the project's pace and schedule to minimize service disruptions. This project included planning, analysis, design, programming, documentation, installation, implementation, trouble-shooting and training related to the improved infrastructure. Specific to the intent of the category, the UPS maintenance program included UPS and systems monitoring.
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP.

	• Planning, analysis, design, programming, documentation, installation, implementation, trouble-shooting, and training related to LAN and WAN efforts • Facility Infrastructure (EIA/TIA 942, Uptime Institute, BISCI etc.) • Electrical design – power distribution including shore, generators, ups and other power components • Communication closet construction – main & intermediate distribution frame rooms • Building systems & wiring: ANSI/NECA/BICSI 568-2006 • Systems Monitoring
Subcontractors	Hotwire, Alcan Electric, Eaton, Castle Rock, Graybar, Tripp Lite
Dates of Engagement	Start Date: January 2008 Completion Date: December 2012
Cost, schedule, and deliverables acceptance	The contract began on May 2007 and expired on December 2012. Cost of the project was $2.2M. Duration of the contract was five years.
Resources utilized	Qualified resources, as described in the RFP, utilized for the services under this project: • Entry • Associate • Professional • Project Manager

Panduit: Enterprise Physical Security Solution

Company and contact Information	**Panduit Corporation** Jeffery Woodward Director - Global Security JSW@panduit.com 800-777-3300 18900 Panduit Drive Tinley Park, IL 60487 www.panduit.com
Brief Description of Work	WWT partner IPVision provided complete planning, analysis, design, implementation and installation, troubleshooting and training, as required, to complete all phases of this Cisco Physical Security Solution for Panduit. This solution enabled Panduit to centralize security operations, eliminating the need for a full security operation at branch offices and saving $653,000 annually. Panduit uses the complete suite of Cisco Physical Security solutions in the new world headquarters building and in branch offices. At headquarters, 120 Cisco IP Video Surveillance cameras monitor the building perimeter and restricted areas, and authorized personnel can monitor live and archived video streams from any web browser on a PC or smartphone, through Cisco Video Surveillance Manager. The Cisco Physical Access Control system protects exterior doors, gates, and restricted areas. Cisco IP Interoperability and Collaboration System (IPICS) enables Panduit personnel and fire, police, and emergency medical services personnel to communicate directly, using any type of radio as well as a telephone, mobile phone, or PC with special client software.

	The world headquarters building also takes advantage of the Cisco Connected Real Estate framework and Cisco Collaboration solutions, including Cisco TelePresence™ and Cisco Digital Signs. "We chose Cisco solutions for our world headquarters building, because they are best in class, and we are confident that Cisco will be around for the long term," says Jeff Woodward, senior manager for Global Environmental Health, Safety, and Security at Panduit
Scope and Intent of Category	WWT performed the following services during this project which apply to the Category and Technologies and Services of Interest as stated in the RFP. • Physical Security – access control, camera & management systems
Subcontractors	None
Dates of Engagement	Start Date: Fall 2009 Completion Date: Ongoing Note: Panduit continues to deploy Cisco Physical Security globally for Panduit. Currently more than seven countries have been completed. There are eight more countries scheduled in the next eighteen months
Cost, schedule, and deliverables acceptance	This project was completed successfully on time and within a budget of approx. $980K.
Resources utilized	Qualified resources, as described in the RFP, utilized for this Physical Security project are: • Professional • Expert • Project Manager

World Wide Technology, Inc.

Customer Testimonial from University of Alaska, Anchorage following VoIP Implementation

"UAA began its relationship with World Wide Technology, Inc. (WWT) in 2005 as we were finalizing our business plan to implement Unified Communications and were looking for a technology partner. We brought WWT on following approval of our plan. WWT oversaw UAA's complete VoIP implementation and PBX replacement providing equipment, engineering/technical resources, and project management. Our initial project was completed in July of 2006. Subsequent VoIP deployments took place at our community campuses in 2008.

Besides deployment expertise, WWT served UAA extremely well supporting our on-going Unified Communications needs. This support ranged from providing operational escalation support for major problems encountered to handling Cisco Call Manager upgrades and support for 3rd party Unified Communications systems.

UAA simply would not have been able to move forward with its Unified Communications strategy on its own without the strong partnership with WWT. Their competence and corporate values fit well with our internal IT Services organization. I would have no hesitation recommending them for similar projects or initiatives."

Dr. Richard Whitney
Chief Information Officer, retired
University of Alaska – Anchorage

Anchorage School District

5530 E. Northern Lights Blvd.
Anchorage, Alaska 99504-3135
(907) 742-4000

January 7, 2013

Mark J. Catalano
Vice President, Enterprise and Commercial Sales
58 Weldon Parkway
Maryland Heights, MO 63043

Mr. Catalano,

The Anchorage School District has just moved our data center. That statement sounds so simple, yet it was an enormous task that took over 30 people hundreds of hours of planning, designing, arguing, redesigning, purchasing, installing, troubleshooting, and so much more. And through all this work, World Wide Technology, Inc. stood with us.

I felt compelled to write this letter to tell you what I'm sure you already know. You have an exceptional team of extraordinary people.

We have worked with your project manager, Charlyne Fair, before on a large network refurbishment project so I knew we were in good hands. Charlyne is detailed, dedicated and a no nonsense task master who manages to maintain good relationships with all the players on the team. All attributes I hold in the highest regard. When we were told Charlyne would be our project manager, I knew the project would be a success.

Patrick Hymel and Mike Cano acted as our data center deployment engineers. They dedicated themselves to this project and gained an impressive level of knowledge regarding our systems. There was no question about 'what server goes where' that Patrick or Mike could not instantly answer.

John Dyer was our network engineer and we leaned on him heavily. He spent considerable time designing and testing all our network equipment prior to the move and was our point man during the move. He worked long hours, solved every problem we encountered and was a calm presence throughout.

Matt Stover, Robert Carver, Rory Devon, Jason Hamlett, Blake Kron, Francois Gema, Darin Bussey, Chris Gleason and Donnie May were all instrumental in making the move a success. I was impressed with every member of the team.

I will end this with a shout out to Corey Kemp. Corey is our 'go to' guy and gets the ball rolling on any project we need. He is a tremendous help to me personally and to my team in general.

Thank you for your consistent approach to hiring and supporting the finest staff, and providing us with an exemplary level of service.

Jane Berglund

Jane Berglund
Chief Information Officer
Anchorage School District

Cisco Channel Partner Program

Gold Certified Partner

Awarded to

WORLD WIDE TECHNOLOGY INC

United States

January 2013 - January 2014

Gold Partner

Validate this certificate at:
cisco.com/go/partnerlocator

Edison F. Peres
Senior Vice President, Worldwide Channels

Certification Check-List

Application	Certification Required	Provided	ATP & Specializations Required	Provided
BISCI	☑		N/A	N/A

Name	RCDD Cert #	PM Years of Experience
Willie Rademaker	#10711	16 years
Matt McClymonds	#161039	8 years

Application	Certification Required	Provided	ATP & Specializations Required	Provided
CISCO GOLD PARTNER	Master Certification in Unified Communications & Security	☑	Cisco TelePresence Video Master (ATP)	☑
	CCDP	☑ 45	IP Interoperability & Collaboration Systems (ATP)	☑
	CCIE	☑ 75	Outdoor Wireless Mesh (ATP)	Previously held, retired by Cisco
	CCNP	☑ 115	Video Surveillance (ATP)	Previously held, retired by Cisco
	CCNP Security	☑ 8	Substation Automation (ATP)	Previously held, retired by Cisco
	CCNP Voice	☑ 80	Unified Contact Center Enterprise (ATP)	☑
			Customer Voice Portal (ATP)	☑
			Cisco Learning Solutions Partner (ATP)	☑
			Master Security	☑
			Borderless Network Architecture	☑
			Collaboration Architecture	☑
			Data Center Architecture	☑
			Small Business	☑
			Advanced Data Center Networking Infrastructure	Previously held, retired by Cisco
			Advanced Data Center Storage Networking	Previously held, retired by Cisco
			Advanced Routing & Switching	☑
			Advanced Unified Communications	☑
			Advanced Wireless LAN	☑
			Cisco Authorized Unified MeetingPlace Partner	Previously held, retired by Cisco

Application	Certification Required	Provided	ATP & Specializations Required	Provided
MCAFEE ELITE PARTNER	Risk & Compliance	☑	N/A	N/A
	Network Defense	☑	N/A	N/A
	Web & Mail Security	☑	N/A	N/A
	Data Protection	☑	N/A	N/A
	System Security	☑	N/A	N/A

Application	Certification Required	Provided	ATP & Specializations Required	Provided
VMWARE PREMIER LEVEL PARTNER	VCP	☑ 45	N/A	N/A

Application	Certification Required	Provided	ATP & Specializations Required	Provided
CITRIX GOLD PARTNER	CCA	☑ 20	N/A	N/A
	CCEE	☑ 5	N/A	N/A
	CCIA	☑ 14	N/A	N/A
	Citrix XenServer	☑ 13	N/A	N/A
	Citrix NetScaler	☑ 9	N/A	N/A

Application	Certification Required	Provided	ATP & Specializations Required	Provided
NETAPP STAR PARTNER	All Disciplines	☑	N/A	N/A
	Authorized Professional Services Partner	☑	N/A	N/A
	Dynamic Data Center Certified	☑	N/A	N/A
	ASAP	☑ 15	N/A	N/A
	NCDA	☑ 14	N/A	N/A
	NCIE	☑ 6	N/A	N/A
	NCSA-SAN	☑ 2	N/A	N/A

Application	Certification Required	Provided	ATP & Specializations Required	Provided
PROJECT MANAGEMENT	WWT requires PMP Certifications for our Program Managers, please see table below:	TBD	N/A	N/A

Name	PMP Certification Number	PM Years of Experience
Willie Rademaker	215562	16 years
Charlyne Fair	46393	16 years
D'Aun Porter	252655	10 years
Gina spangler	1452376	10 years
Andre Sergoyan	1515199	10 years
Elain Gentner	1261509	6 years
Kurtis Devon	1433181	4 years

Cisco Channel Partner Program

Gold Certified Partner

Awarded to

WORLD WIDE TECHNOLOGY INC

United States

January 2013 - January 2014

Gold Partner

Validate this certificate at:
cisco.com/go/partnerlocator

Edison F. Peres
Senior Vice President, Worldwide Channels

Cisco Channel Partner Program

Master Security Specialized Partner

Awarded to

WORLD WIDE TECHNOLOGY INC

United States

January 2013 - January 2014

Cisco Master Security Partner

Validate this certificate at
cisco.com/go/partnerlocator

Edison F. Peres
Senior Vice President, Worldwide Channels

Cisco Channel Partner Program

Master Unified Communications Specialized Partner

Awarded to

WORLD WIDE TECHNOLOGY INC

United States

January 2013 - January 2014

Master Unified Communications Partner

Validate this certificate at:
cisco.com/go/partnerlocator

Edison F. Peres
Senior Vice President, Worldwide Channels