

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE J	PAGE 1 OF 8 PAGES
2. AMENDMENT/MODIFICATION NO. P00039	3. EFFECTIVE DATE See Block 16C.	4. REQUISITION/PURCHASE REQ. NO. N/A	5. PROJECT NO. (If applicable) RFID S0507A	
6. ISSUED BY US Army CECOM Acquisition Center- Washington ATTN: AMSEL-AC-WA-C (Daniel Keyes) (703) 325-8718 2461 Eisenhower Avenue Alexandria, Virginia 22331-0700 e-mail: Daniel.Keyes@cacw.army.mil		7. ADMINISTERED BY (If other than Item 6) DCMC San Francisco DCMDW-GFOC 1265 Borregas Avenue Sunnyvale, California 94089-1308		
8. NAME AND ADDRESS OF CONTRACTOR SAVI Technology 615 Tasman Drive Sunnyvale, California 94089			(4)	9A. AMENDMENT OF SOLICITATION NO.
CODE OJ463 FACILITY CODE				9B. DATED (SEE ITEM 11)
			4	10A. MODIFICATION OF CONTRACT/ORDER NO. DAAB07-97-D-V007
				10B. DATED (SEE ITEM 13) 8 August 1997

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATA SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and data specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)
N/A

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(4) A.	THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
B.	THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
4 C.	THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Part C-1-1(h). Current Technology Substitutions/Additions/Insertions.
D.	OTHER (Specify type of modification and authority)

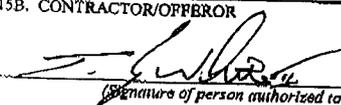
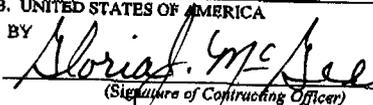
E. IMPORTANT: Contractor is not X is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

SEE PAGE 2

E-mail: gloria.mcgee@cacw.army.mil/703-325-2927

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) Carey White, CFO	15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED 1/24/02	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) GLORIA J. MCGEE CONTRACTING OFFICER	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)	16C. DATE SIGNED 29 Jan 2002
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NSN 7540-01-152-8070
PREVIOUS EDITION UNUSABLE

30-105
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STANDARD FORM 30 REV. 10-83
Prescribed by GSA
FAR (48 CFR 53.24)

A. The purpose of this modification is to incorporate Savi Technology's Contract Change Proposal (CCP) 28-Rev, Real Time Locating System, and to revise CLIN 5015BF, as proposed in CCP 30-Rev, dated 20 Dec 01.

B. Part B-1 is hereby modified as follows:

1. In accordance with CCP 28, Real Time Locating System, is added as shown in the following table:

CLIN	DESCRIPTION	OEM	Model No.	QTY	Unit	Unit Price
5055	Real Time Locating System (RTLS)					
	Location Devices and Accessories					
5055AA	WhereTag II. (10 each)	WhereNet	TFF-1010-00AA	1	LT	\$ 526.70
5055AB	WhereCall II. (10 each)	WhereNet	TFF-1610-00AA	1	LT	\$ 4213.80
5055AC	WhereCall II Programmable Logic Computer (PLC)	WhereNet	TFF-1611-00AA	1	EA	\$ 478.85
5055AD	WhereTag Reference	WhereNet	TFF-1800-00AA	1	EA	\$ 282.52
5055AE	WhereTag II Foam Mounting Tape. (50 each)	WhereNet	TM-202-03	1	LT	\$ 10.00
5055AF	WhereTag Poly-Lock Tape. (50 each)	WhereNet	TM-204-00	1	LT	\$ 33.00
5055AG	WhereTag II Vehicle Rearview Mirror Mount. (10 each)	WhereNet	TM-206-02	1	LT	\$ 66.60
5055AH	WhereTag Temporary Pole Trailer Mount	WhereNet	TM-208-00	1	EA	\$ 378.29
5055AJ	WhereTag II Temporary Clip-On Trailer Mount	WhereNet	TM-209-01	1	EA	\$ 50.76
5055AK	WhereTag II Temporary Clip-On ISO Container Mount	WhereNet	TM-210-01	1	EA	\$ 143.65
5055AL	Installation & Removal Pole for Clip-On Trailer and ISO Container Mounts	WhereNet	TA-400-00	1	EA	\$ 339.98
5055AM	WhereNet Aware Label. (50 each)	WhereNet	TA-401-00	1	LT	\$ 47.88
5055AN	WhereCall II Hanger. (20 each)	WhereNet	TM-216-00	1	LT	\$ 114.00
	Location Processors, Antennas and Accessories					
5055BA	Location Processor Chassis with Timing Interface Card (TIC) and Watchdog Card - Eight Slot	WhereNet	FEP-3001-00AA	1	EA	\$ 8,072.31
5055BB	Location Antenna	WhereNet	FER-3001-00AA	1	EA	\$ 1,416.46
5055BC	30 ft Dual Diversity Antenna Kit, 360°	WhereNet	AK-200-00	1	EA	\$ 710.77
5055BD	Antenna Processor Card	WhereNet	RPC-3500-00AA	1	EA	\$ 2,640.00
5055BE	Cabinet for Location Processor Chassis	WhereNet	FH-390-00AA	1	EA	\$ 4,772.31
5055BF	International Cabinet for Location Processor Chassis	WhereNet	FH-390-01AA	1	EA	\$ 5,889.23
5055BG	8 Channel Lightning Protection	WhereNet	LP-391-00	1	EA	\$ 1,523.08
5055BH	Outdoor Antenna Mount	WhereNet	RM-250-00	1	EA	\$ 91.38
5055BJ	Indoor Antenna Mount	WhereNet	RM-210-00	1	EA	\$ 86.31
5055BK	Antenna Cable Extender	WhereNet	CE-310-00	1	EA	\$ 253.85
5055BL	Location Processor Custom Cabinet/Rack Mount Hardware Kit	WhereNet	FH-010-00	1	EA	\$ 502.62
5055BM	AC power cord, Switzerland	WhereNet	PC-051-00	1	EA	\$ 15.23
5055BN	AC power cord, Italy	WhereNet	PC-052-00	1	EA	\$ 10.15

5055BP	AC power cord, Australia	WhereNet	PC-053-00	1	EA	\$ 15.23
5055BQ	AC power cord, Europe	WhereNet	PC-054-00	1	EA	\$ 10.15
5055BR	AC power cord, UK	WhereNet	PC-055-00	1	EA	\$ 15.23
	Mobile Devices					
5055CA	WhereWand, 115 VAC	WhereNet	WND-2010-00AA	1	EA	\$ 3,548.77
5055CB	WhereWand, 230 VAC	WhereNet	WND-2010-01AA	1	EA	\$ 3,548.77
	Remote Devices					
5055DA	WherePort Remote WhereTag Exciter	WhereNet	WPT-3200-00AA	1	EA	\$ 609.23
5055DB	WherePort Power Supply, North America, 120VAC	WhereNet	PS-010-00	1	EA	\$ 50.77
5055DC	WherePort Power Supply, Europe, 230VAC	WhereNet	PS-014-00	1	EA	\$ 50.77
	Software					
5055EA	WhereSoft Visibility Suite 2.2 (Licensed based on number of channels per site channel). Requires Microsoft SQL Server 7.0.	WhereNet	VSS-10002-02AA	1	EA	\$ 2,413.38
5055EB	WhereSoft Yard 3.0 – (Site license regardless of number of tags).	WhereNet	YMA-31003-00AA	1	EA	\$ 40,223.08
5055EC	WhereSoft Container 2.2 – (Site license fee, fewer than 1000 tags on site).	WhereNet	CMA-32102-02AA	1	EA	\$ 40,223.08
5055ED	WhereSoft Container 2.2, (Site license fee, 1000 or more tags).	WhereNet	CMA-32002-02AA	1	EA	\$ 80,446.15
5055EE	WhereSoft Vehicle 1.0 – (Site license regardless of number of tags).	WhereNet	VIM-34001-00AA	1	EA	\$160,892.31
5055EF	WhereNet Software Developer's Kit 1.0	WhereNet	SDK-20001-00AA	1	EA	\$ 4,022.31
5055EG	WhereSoft Asset Management 2.0 (Site license regardless of the number of tags).	WhereNet	AMA-36002-00AA	1	EA	\$ 40,223.08

2. CLIN 5015BF is hereby revised as follows to delete items that are not required and were deleted in CCP30-Rev, dated 20 Dec 01:

FROM:

CLIN	DESCRIPTION	OEM	MODEL NO.	QTY	UNIT	UNIT PRICE
5015BF	Active Transportable Interrogator TCG without Solar or Tripod	Savi	SEE ATTACHMENT	1	EA	\$ 3,673
	Case 1					
	Qty Description					
	1 Active Interrogator					
	1 Mounting arm					
	1 User's Manual, Active Interrogator					
	1 RS-485 Interface Adapter					
	1 RS-485 Cable					
	1 Coupler, RS-485 Cable					
	1 Battery set, spare (two batteries in set)					
	1 Battery Charger					
	1 Adapter, Battery Charger Power Plug *					
	1 AC Power cable *					
	1 Adapter, AC Power Plug *					

CLIN	DESCRIPTION	OEM	MODEL NO.	QTY	UNIT	UNIT PRICE
	1 Battery Power cable and adapter					
	1 Vehicle Power cable					
	1 Fuse set, spare					
	1 Transit Case, 27 x 29 x 15					
	1 Serial Cable DB9F-DB25M					
	* selected according to specified location					

TO:

CLIN	DESCRIPTION	OEM	MODEL NO.	QTY	UNIT	UNIT PRICE
5015BF	Active Transportable Interrogator TCG without Solar or Tripod	Savi	SEE ATTACHMENT	1	EA	\$ 3,673
	Case 1					
	Qty Description					
	1 Active Interrogator					
	1 Mounting arm					
	1 User's Manual, Active Interrogator					
	1 RS-485 Interface Adapter					
	1 RS-485 Cable					
	1 Coupler, RS-485 Cable					
	1 AC Power cable and adapters *					
	1 Vehicle Power cable					
	1 Fuse set, spare					
	1 6 ft. Serial Cable DB9F-DB25M					
	1 Transit Case, 27 x 29 x 15					
	* selected according to specified location					

C. Part D-1, RFID SPECIFICATION AND STATEMENT OF WORK, is hereby modified as follows:

FROM:

ORDNANCE ENVIRONMENT.

Active RFID equipment is intended for tactical environments. The Contractor shall certify with the submission of the proposal, that Active Transponders are safe to use as close as one inch — and Active Hand-held and Active Transportable Interrogators are safe to use as close as five inches (one inch desired) — from unshielded munitions that contain 10 mA no-fire current, electro-explosive devices (EEDs). This certification shall be required for each type of Active RF component provided on the Contract, throughout the life of the Contract. A determination of the required safe separation distance can be made by referring to the graph entitled "Safe Separation Distance Between an RF Source and Unshielded Munitions Containing 10 mA No-fire Current Electro-Explosive Devices (EEDs)" in Exhibit-A. This graph relates safe separation distances to irradiated output power as a function of operating frequency. Although many ordnance items

have no EEDs, and other items have EEDs that are less sensitive to RF energy, this requirement represents a worst-case scenario that ensures safe operation around what frequently is unknown ordnance (unknown to transporters and others). All Interrogators, Transponders, and RF Relays shall be furnished with a warning label that clearly indicates the safe separation distance that must be maintained between ordnance and the irradiating source.

TO:

4.4 ORDNANCE ENVIRONMENT.

Active RFID equipment is intended for tactical environments. The Contractor shall certify with the submission of the proposal, that Active Transponders are safe to use as close as one inch — and Active Hand-held and Active Transportable Interrogators are safe to use as close as five inches (one inch desired for Active Transponders)(8 inches desired for Real Time Location Antennas and Transponders) — from unshielded munitions that contain 10 mA no-fire current, electro-explosive devices (EEDs). This certification shall be required for each type of Active RF component provided on the Contract, throughout the life of the Contract. A determination of the required safe separation distance can be made by referring to the graph entitled "Safe Separation Distance Between an RF Source and Unshielded Munitions Containing 10 mA No-fire Current Electro-Explosive Devices (EEDs)" in Exhibit-A. This graph relates safe separation distances to irradiated output power as a function of operating frequency. Although many ordnance items have no EEDs, and other items have EEDs that are less sensitive to RF energy, this requirement represents a worst-case scenario that ensures safe operation around what frequently is unknown ordnance (unknown to transporters and others). All Interrogators, Transponders, and RF Relays shall be furnished with a warning label that clearly indicates the safe separation distance that must be maintained between ordnance and the irradiating source.

FROM:

4.6 RFID INTEGRATED COMPONENT CONFIGURATIONS (RICC)

The Government requires Active and Passive RFID components that can be combined to create RFID Integrated Component Configurations (RICC). The Contractor-provided components shall integrate into a network configuration, using RF Local Area Network connectivity protocols, to accomplish the automated collection, storage, retrieval, processing, receipt, and transmission of data. Each configuration shall be provided with software that shall permit the Government user to operate and control the functioning of the RFID components. Each network shall be intra-operable with all components of the respective network. The Government desires that networks shall be capable of being integrated at the host level to use common databases, operating software, and user interfaces when these networks are fielded together. Networks configured for the active RFID components shall be capable of managing a minimum of 100 Interrogators through a single host computer and host computer connection. In the event that one or more Interrogators within the network fails or is removed, this condition shall not affect the proper operation of other Interrogators in the network. Networks configured for the beacon transmission system shall be capable of managing up to ten readers with a single network system. The network shall be capable of automatically detecting and reporting to the host computer transponders introduced, removed, or failed within the environment domain without requiring the user to make changes to the network configuration.

TO:

4.6 RFID INTEGRATED COMPONENT CONFIGURATIONS (RICC)

The Government requires Active and Passive RFID components that can be combined to create RFID Integrated Component Configurations (RICC). These configurations include interrogation, Real Time Locating Systems, and beacon technologies. The Contractor-provided components shall integrate into a network configuration, using RF Local Area Network connectivity protocols, to accomplish the automated collection, storage, retrieval, processing, receipt, and transmission of data. Each configuration shall be provided with software that shall permit the Government user to operate and control the functioning of the RFID components. Each network shall be intra-operable with all components of the respective network. The Government desires that networks shall be capable of being integrated at the host level to use common databases, operating software, and user interfaces when these networks are fielded together. Networks configured for the active RFID components shall be capable of managing a minimum of 100 Interrogators through a single host computer and host computer connection. In the event that one or more Interrogators within the network fails or is removed, this condition shall not affect the proper operation of other Interrogators in the network. Networks configured for the beacon transmission system shall be capable of managing up to ten readers with a single network system. The network shall be capable of automatically detecting and reporting to the host computer transponders introduced, removed, or failed within the environment domain without requiring the user to make changes to the network configuration. The Contractor shall provide a Real Time Locating System (RTLS) that will consist of antennas, Location Processors, Tags and Software (Operating Software for PC and Application Development Software). This system shall be capable of reading signals indoors at a distance up to 350 feet and outdoors at a range up to 1000 feet. The system shall provide for locating a specific tag within 10 feet.

ADD THE FOLLOWING PARAGRAPHS:

4.10.13 Locating System Hardware Configuration

4.10.13.1 General Requirements

The Contractor shall provide hardware needed to install a Real Time Locating System (RTLS) that will consist of antennas, Location Processors, Tags and Software (Operating Software for PC and Application Development Software); upgrades and updates to all delivered Software and any necessary Separately Orderable Components. This system shall be capable of reading signals indoors at a distance up to 350 feet and outdoors at a range up to 1000 feet. The system shall provide for locating a specific tag within 10 feet.

4.10.13.2 Functional Requirements

4.10.13.2.1 Location Processor (LP)

Each LP shall support a minimum of 8 antennas and multiple LPs that are interconnected with standard Ethernet and a RG-6coax timing cable. The LPs shall connect via Ethernet to a database server that provides location data for tags within the coverage area accurate to within 10 feet. The location shall be provided in both map and tabular form. Tags in motion in the coverage

area shall be monitored regardless of their rate of motion. The Location Processor shall be capable of operating in a temperature range of +50° to + 104° F.

4.10.13.2.2 Antennas

An antenna shall be provided which is an active receiver and antenna array that mounts remotely and is connected to the Location Processor. It shall receive spread spectrum radio signals from tags, handheld readers, and other RTLS enabled transmission devices. The antennas shall be housed in a rugged enclosure that are suitable for indoor or outdoor environments. An optional lightning protection package shall be available for outdoor installations. The antennas shall be powered by a low voltage DC current supplied by the Location Processor. The coaxial cable that connects the antennas to the Location Processor is desired to be up to 2,000 feet in length. Repeater modules shall be made available to increase this distance to 4,000 feet. The antennas shall be capable of operating in a temperature range of -22° to 140° F.

4.10.13.2.3 Handheld Reader

The handheld reader shall be capable of wirelessly configuring all tags and associated devices. Handheld readers shall have a simple user interface to guide the operator through the process of reading or setting tag parameters. A built-in bar code scanner shall be available for fast entry of tag IDs. Tag to handheld reader communication shall be approximately 30cm (1ft). Each handheld reader shall include a hand-held antenna, PC Card, communication dock, battery charger, interface cable and software. The handheld reader shall be available in 110 VAC and 230 VAC versions.

4.10.13.2.4 Tags

Tags shall be industrially hardened and be easily and securely attached to, or detached from, existing conveyance equipment. Attachment of tags to conveyance equipment shall require no modifications to the conveyance equipment and be user-replaceable by hand or with the use of commonly available tools. The tags shall provide long-range transmit communications and short-range two-way communications. The tags shall be able to be read from and configured by the handheld reader at distances of 1 foot. This communication link shall be omni-directional. Tags shall be powered by an internal battery that shall have a battery life of at least seven years with the tag blink rate set at one transmission every five minutes. The tag beacon rate shall be field configurable for each individual tag from 5 second to 1 hour intervals. Each tag shall have a unique internal identification number that is transmitted via RF or read using a standard barcode scanner. The tags shall also have the ability to communicate with the handheld reader. The tags shall transmit omni-directional and not require line-of-sight communication.

4.10.13.2.5 Software Requirements

Software shall operate, at a minimum, AT-compatible PCs and handheld readers with communicator cards. Necessary application development software and Operating Software for the PC and handheld reader shall be provided. All software provided shall have a Graphical User Interface that is compatible with Windows 95, Windows 98, and Windows NT operating systems. Software for portable terminals shall be compatible with DOS. Software shall have the capability to set tag transmission rates and display precise location of tagged objects on maps. RTLS software shall have the ability to display operational status of all network components and indicate components that need attention. RTLS devices shall be manageable using Simple Network Management Protocol. RTLS Software shall have the capability to report low battery power conditions for Tags. RTLS Software shall provide the capability for ad hoc searching for specific tag data stored in a database; the ability to be copied and pasted into an MS Word or

Excel document and the ability to print reports from data gathered from tags, such as lists of tags and their precise locations present in the operating environment. The RTLS Software shall have the capability of defining locations on a site map in which tagged objects are to be located. All RTLS Software shall be provided on a compact disk.

4.10.13.2.6. Remote Devices.

A remote proximity communications device shall be provided to trigger a tag to transmit an alternate blink pattern when the tag passes through the proximity device's electromagnetic field. Electromagnetic field thresholds shall be adjustable up to 20 feet. The remote device shall be sealed against water and dust, and acceptable for indoor and outdoor applications. An appropriate adjustable mounting bracket shall be provided.

D. The following contract Parts are replaced in their entirety:

Part B-1, Option Year 5

Part B-1, Attachment

Part D-1

Changes in Microsoft Excel are denoted by a bar (|) in the right margin.

Changes in Microsoft Word are implemented using the highlight (but not strikethrough) technique as follows:

Under Tools, Options, Track Changes Tab:

Inserted text; Mark: Underline

Changed lines; Mark: Right border

E. As a result of this modification, the amount of contract obligation remains the same.