### EOC Operations: Extending Outpost's Reach

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# Topics

- Building on the ICS-213 General Message Form
- Leveraging Local Area Networks
- Demo's



# Aligning features to needs (continued...)

Environment:	<i>Definition:</i> the circumstances or conditions that surround us.
	Each situation is different how do we adapt the tools we use to our environments?
Policy:	Definition: a definite course or method of action.
	In a community of packet users, what policies do we adopt to ensure order, consistency, and efficiency in what we do?
Mission:	Definition: the task with which we are charged.
	How do we support our served agencies in their efforts to minimize loss of life and property, and speed the recovery?



# **EOC Operations**

#### **Emergency Operations Center**

- Central command and control facility responsible for emergency or disaster management functions
- Responsible for the strategic overview, or "big picture", of the disaster
- The first most critical component of an EOC is the individuals who staff it
- The second most critical component of an EOC is its communications systems





# **EOC Operations**

#### **Communications systems**

- Ranges from simple word of mouth to sophisticated communications networks
- Must provide for a redundant path to ensure that both <u>situational awareness</u> <u>information</u> and <u>strategic orders</u> can pass into and out of the facility without interruption.
- For continuity of operations considerations, communications system backbone components are not normally located at the EOC.
- Most municipalities have <u>ARES and/or RACES volunteer teams</u> on staff and rely on them for <u>primary</u> or <u>secondary communications</u> channels



# Interacting with the EOC Operations

Sample Information flow – Cupertino, CA



- Originally designed as a multipart self-copying form for use as an interoffice memo.
- Increasingly used for messages between parties who are not in the same location.
- The form is often originated in one location and transmitted electronically to another location.
- Replies are returned electronically and the two "parts" of the form are matched together.
- Incident messaging, message documentation, and transmission are being <u>adapted</u> to include emerging needs and <u>best practices</u>.

Source: http://ics213.com/

Everyone's got an opinion on how ICS-213 should look



• Most ICS-213 Message Forms look like this...

	GENERAL MESSAGE									
	<b>TO</b> :		POSITION	1:						
	FROM:		POSITION	ł:						
orm	SUBJECT:		DATE:		TIME:					
	MESSAGE:									
;										
			loos	TION						
	SIGNATURE:		1031	IION:						
	REPLY:									
Outpost's Reach	DATE:	TIME:	SIGNATURE/POSITIC	N:						

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#### **Multiple flavors**

• One way, RACES variation

	GENERAL MESSAGE
TO	POSITION
FROM	POSITION
SUBJECT	DATE/TIME
MESSAGE:	
DATE TIME	SIGNATURE/POSITION

Source:

http://http://ronhashiro.htohananet.com/amradio/emcomm/

RECEIVED FROM	DATE	TIME	RADIO POSITION/OPERATOR	MSG NUMBER
SENT TO	DATE	TIME	RADIO POSITION/OPERATOR	MSG NUMBER

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213 IC \$ 1/79 – Modified SCD RACE \$ 5/08 NFE \$ 1336

#### **Multiple flavors**

• Header variation...

 

 Message Number \_\_\_\_\_
 General Message ICS-213
 Check \_\_\_\_\_

 To:
 Position:

 From:
 Position:

 Subject:
 Date:



	VIRGINIA	RACES - ICS FORM 21	13 GENERAL ME	SSAGE	E S
<u>TO:</u>		POSITI	ON:		Sale of the second s
FROM:		POSITI	ON:		
SUBJECT:		DATE:		TIME:	
MESSAGE NUMBE	ER:				
					5
					10
					15
					20
					25
					30
					35
					40
					50

#### • Voice-net ready...

SIGNATURE:

POSITION: (Reply on back)

#### **Multiple flavors**

• One way, detailed

M	ESSAG	SE FORM	W Msg	/hen Receivin g.: Sender's n	ng <sup>2</sup> 1 nsg. #	Msg. #	When Sending Msg. <sup>3</sup> Receiver's msg. #
►U (See	se Ballpoint Pen- back for instructions	Press Hard; Print Clearly					
Da	te: (MM/DD/YY) <sup>1</sup> _/	Situation Severity (✓ one) <sup>4</sup> EMERGENCY (e.g., Life Threat)	Msg. H	andling O IMEDIAT (As Soon as I	rder (√one) <sup>5</sup> TE Possible)	Message R TAKE A Ves	equests You To: <sup>6</sup> CTION (√one) □No
Tir	ne: (24 hour clock)			NORITY		REPLY	(√one)
		(e.g., Property Inreat)		Less Than C	me Hour)		y ∐ № VOUR INFO
2:001	0001 to 2400 PM = (12+2) = 1400 Hrs	(All others)		More Than (	One Hour)	(no acti	on required)
	ICS Positi	on: (required) <sup>7</sup>	1		ICS Position	: (required)	8
То	: Location:	(required) <sup>9</sup>		From:	Location: (re	equired) <sup>9</sup>	
	Name: (op	tional)			Name: (optio	onal)	
	Telephone	#:(optional)			Telephone #	: (optional)	
Me	ssage: <sup>12</sup> (what	, when, where needed; how	long; co	ntact nam	e and phone n	umber) KEE	EP MSG BRIEF
A	CTION TAK	EN: <sup>13</sup> (For use by Originator / 1	Recipient)	► USE SEP	PARATE MESS	AGE FORM IF	SENDING REPLY!
0	C: 🛛 Man	agement Operations		Planning	Logist	tics 🗖	Finance
C	perator Use C	Duly: <sup>14.</sup>					
H	low Received	or Sent □ (✓one)		Operato	r Call Sign:		
	<b>Telephone</b>	Dispatch Center		Operato	r Name:		
	EOC Radio	G FAX Courie	er				
	J Amateur Rad	lio 🛛 Other		Date:		Time	e:
Out Ince	going (Sent): <sup>15</sup> Message Origina Radio: After senc oming (Received):	tor: Send the top copy (white) to r ling, complete Disposition info., re 15	radio, yellov etain white (	w to PLANN copy for file	ING, retain the pi in radio.	nk copy for you	r reference.

If ICS-213 is what the OES uses, how do we tighten the alignment between what ARES/ RACES Teams have to offer with their needs?

How do we support the passing of situational awareness information and strategic orders?

What are the opportunities?

Adding an ICS-213 form to Outpost is one of the more frequent asked-for requests



# **ICS-213 Example**

Santa Clara County RACES

### ICS-213 in Santa Clara County

- Santa Clara County OES required a backup means to pass RIMS messages; Packet Radio was the logical choice
- County RACES also needed more standard means for soliciting and collecting information from the cities
- PacForms are web-based forms that can be deployed to the EOC staff for quick data entry
- Message can be saved to a file or passed directly to Outpost by Opdirect MCS

**EOC Operations: Extending Outpost's Reach** 

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Edit	View	Favorites Tools H	elp								
8	8 -	😁 http://www.nasa.g	ov/cente	🥖 ARES/RACES N	IESSAGE F 🗙					🙆 • E	🕥 👻 🖶 👻 Eer Page 🕶 🍥 T
	(This	EOC MI PacFORMS adap By F form works with Out For Instruction	tion of Phil Her post/O s usin	SAGE F SCC0 ICS Form 213 derson, KF6ZSQ pDirect for Automati g this form Cli	ORM (Ver. 2.0) c ASCII text si ck Here.	ave)	2.) V Se	Vhen Receiving Msg.: nders's msg. #		Asg. #	3.) When Sending Msg.: Receiving msg. #
1	1 (M b.) T	a.) Date: M/DD/YY) 03/10/2009 Time: (24 hour clock) 2202 0001 to 2400 I = (2+12)=1400 Hrs.	4.) \$ One 0 1 0 1	Situation Sever ) EMERGENCY (e.g., Life Threa JRGENT (e.g., Property T OTHER (All Others)	<b>ity (Select</b> at) Гhreat)	5.) N One 0	Asg. Ha MME (As So PRIOI (Less ROUT (More	andling Order DIATE oon as Possible RITY Than One Hor INE Than One Hor	r (Select e) ur) our)	6.) Messag TAKE one) REPL C C (No a	ge Request You to:         ACTION (Check         Yes       O No         Y (Check one)         Yes       O No         OR YOUR INFO.         action required)
To:	7.) (rec 9a.) (rec Nai	ICS Position: quired) ) Location: quired) me: (optional)					From:	8.) ICS Posit (required) 9b.) Location (required) Name: (optic	iion: n: onal)		
	Tel (on	ephone #: tional)	Γ					Telephone #: (optional)	:		
11.)	) RE	FERENCE (e.g ssage (what, wł	, Nui	nber of earlier here needed; h	msg.):	ontad	ct name	e and phone 1	number) H	ŒEP MSG I	BRIEF
13.) RE	) Act PLY	tion Taken: (Fo ′!	r use	by Originator	/ Recipient	) ->	USE	SEPARATE	MESSAG	E FORM IF	SENDING
									×		
CC	:	Management		Operations	D Plann	ing		Logistics	<b>Financ</b>	e	
14.) Ho one C	) Op w Ra bel Tel EO An	erator use Only eceived C or ow) lephone PC Radio nateur Radio	Sent C C	C (Check O Dispatch Cent FAX C Other	ne this line er Courier	e and	Oper Oper Date	ator Call Sig ator Name: 103/10/2009	n: Time:	2202	
Out Me Rac Inc Rac PI	tgoir ssag lio: 1 omir lio: 1	ng (Sent): e Originator: Se After sending, co ng (Received): After receiving, UNC: retein val	end th omple compl	e top copy <b>(whi</b> te Action Taken ete Action Take	<b>te)</b> to <b>Radi</b> info. in gra m info. in gr	<b>o, ye</b> y are ray ar	<b>llow</b> to a, keep rea, rou	PLANNING white for file te top copy (w	, retain the in <b>Radio</b> . white) to th	<b>pink</b> copy f e <b>addressee</b> ,	or originators file.

S/RACES MESSAGE FORM - Windows Internet Explore

#### Introduction

### What is Opdirect.exe?

- Outpost program bolt-on
- Listens for and receives messages from remote sources, such as SCC's ICS-213, by a WinSock connection
- Processes and writes a message to the Outpost message DB
- Requires the Outpost Operator to complete the message and then press "send."





Introduction

### **Starting Opdirect.exe**

- From Outpost, Tools > Message Settings, Advanced Tab
- Currently, controls to schedule Opdirect.exe on Outpost startup

🗱 Message Settings 🗙
New Messages Replies/Forwards Tracking Deleting Advanced
Incoming Message Handling ✓ Open a message in its native program (PacForms only) ✓ Automatically enable the Opdirect Message Capture System (Restart Outpost for this setting to take effect)
ß
OK Cancel Apply



#### Processing SCC's online EOC Message Form



Processing SCC's online EOC Message Form

Re Edit Setup Tools Actions Help	🗱 CUP196: EOC MESSAGE FORM - Packet Message
New         Open         Delete         Print         Send/Receive	File Edit Actions Window Help
Folder List Sent Folder	Print Send Save Delete Close Urg Pvt Bul NTS
In Tray CUPEOC LOSEOC W6xSC-1 CUP181: Request contact with J.Clark 4 CUPEOC XSCEOC W6xSC-1 CUP181: Request contact with J.Clark 4 CUPEOC XSCEOC W6xSC-1 CUP182: 0/R Cupertine EOC Operati 4	Private Message
Out Tray CUPEOC XSCEOC W6XSC-1 CUP183: E/T RIMS 5C COUNTY LO 4 CUPEOC XSCEOC W6XSC-1 CUP183: D/R MSG EOC Radio Rece 4	Bbs: W6XSC
CUPEOC XSCEOC W6XSC-1 CUP403: 0/R MSG Cupetino Hams 4 CUPEOC LOSEOC W6XSC-1 RE: L0S-106 · CUP181: Request con 4 CUPEOC SABEDC W6XSC-1 CUP181: Request con 4	From: KN6PE
Msgs         NTS         KN6PE         95035@         WR6AB         QTC 1 R MILPITAS CN (?)         (           NTS         KN6PE         95035@         K6FB-2         RE: QTC 1 R MILPITA90CA (?)         (	To:
Archive KN6PE SMTP:ke W2LKS FW: UTC T MILPTAS LA (-7-) t KN6PE VE98UF W2LKS RE: 189: got it	Subject: CUP196: EOC MESSAGE FORM
Image: Current	<pre>!PACF! # EOC MESSAGE FORM # JS-ver. 2.1.3, 11-11-07 # FORMFILENAME: Message.html # Form Item numbers are followed by a colon (:) # Answers are enclosed in brackets ( [ ] ) 2.: [] MsgNo: [101] 3.: [] 1a.: [03/11/2009] 1b.: [1333] 4.: [EMERGENCY] 5.: [PRIORITY] 6a.: [NO] 6b.: [] 6c.: [] 6d.: [] 7.: [Ops Section]</pre>

Processing SCC's online EOC Message Form

### **SCC's PacFORMS Implementation Details**

- Supports a "reverse read" capability to re-assemble the message back into human-readable form
- Can be deployed on a memory stick to the EOC Staff for message entry and file creation
- Must be deployed on the same PC as Outpost for direct message integration with Outpost



# Next Step... ICS-213 Message Maker

- A generic ICS-213 general message form
- Supports limited local message management
- Message delivery to Outpost by Opdirect.exe
- Can exist anywhere on the same LAN as the Outpost PC
- This is a prototype... input requested!!!

🎊 ICS-21	l3 Messa	ge Maker - Pi	ROTOTYPE					×
File Edit	Help							
New	Reply	Save/Send	Clear	Browse	<< >> R	esend		
To:				Position:				
From:				Position:				
Subject:				Date:			Time:	
 └Message								
	1							
	1	75						
l. Cianabara				Desilient				
Signature				Position:				
Reply-								
								-
Signature				Position:				
orginataro				Date			Time:	<u> </u>
					,			
ICS-213 Me	ssage Entr	у						21:34:42
								5

### **Configuration Options**

- File > Properties...
- Formatting... set date, time and From: and To: defaults
- Browsing... lets you look for a message saved, sent, or received.

**NOTE:** a copy of all messages are left locally, and can be reviewed, or used as the basis for the next message.

 Remote Access... the network parameters describing where to find Outpost

	S ICS-213 Prope	erties		×
Maker	Formatting Brow	sing Remote Access	ß	
	Date format:	mm/dd/yyyy		
	l ime Format:	[hh:mm	]	
*	Defaults - New M	lessages		
	To:	Name Dan Dreager	Positi Ops Chief, Co	on unty OES
	From	Mark Patterson	Ops Chief, Cu	pertino
S. ICS-213 Prope	erties		×	
Formatting Brow Browse these me ○ All Messay ○ Today's M ○ User Defin 090311 Browse by Origin I Created m	rsing Remote Acces essages lessages hed File Mask	s] 		Cancel
ICS-213 Properties	messages	×		
formatting Browsing Remote	Access			
Remote Host: 127.0.0.1			Cancel	
Remote Port: 9334				1
Network Timeout: 1000 Connect	msec Test			

### Pressing New...

- Fills in the defaults... To:, From:, Date, and Time
- Sets the Signature to the Sender (From:), can be changed
- Fill in...
  - Subject
  - Message

Press Save/Send

 Ics213mm.exe connects to Opdirect, sends the message, and saves this message in a file named:

ICS-213-yymmddhhmmssxy.txt

105-21	3 Messag	je Maker - P	ROTOTYPE				
e Edit I	Help						
New	Reply	Save/Send	Clear	Browse	<< >> Resend		
ew messaj	ge						
To: D	)an Dreage	91		Position:	Ops Chief, County OES		
From:	fark Patter:	son		Position:	Ops Chief, Cupertino		
ubject:				Date:	03/12/2009	Time: 13:07	
Message-							
			2				-
			÷				
				_			-
Signature:	Mark Pa	tterson		Position:	Ops Chief, Cupertino		
Benlu							
							-
							-
Signature				Position:			
				Date:		Time:	
							13:08

#### **Pressing Save/Send...**

🚷 ICS-213 Message Maker - PROTOTYPE	X IC5213-09031213102613.txt - Notepad -
File Edit Help	File Edit Format View Help
New Reply Save/Send Clear Browse << >> Resend	<ics213>  TO: Dan Dreager POSITION: Ops Chief, County OES</ics213>
To: Dan Dreager Position: Ops Chief, County OES	TROW, Mark Datterson
From: Mark Patterson Position: Ops Chief, Cupertino	POSITION: Ops Chief, Cupertino
Subject:         Status of Stevens Creek Dam         Date:         03/12/2009         Time:         13:10           Mosepage         Mosepage	SUBJECT: Status of Stevens Creek Dam
Be advised that Santa Clara Valley Water District confirmed that the Dam withstood the last aftersho but recommends periodic observations of its downstream face. Cupertino will post volunteer watche the parking lot.	ock, es at MESSAGE: Be advised that Santa Clara Valley Water District confirmed that the Dam withstood the last aftershock, but recommends periodic observations of its downstream face. Cupertino will post volunteer
Signature:       Mark Patterson       Position:       Ups Chief, Cupertino         ICS-213 Message Maker       ×         Message saved as ICS213-09031213102613.txt, and sent to Outpost!	SIGNATURE: Mark Patterson POSITION: Ops Chief, Cupertino 
ок Signature Position: Date: Тime:	
Message saved and sent	13:10:59

Create this message file...

- 🗆 ×

Processing ics213mm message

🚯 ICS-213 Message Maker - PROTOTYPE 🛛 🗙	🕃 Opdirect MCS	🗽 Outpost Pa	cket Message Manager		
File Edit Help (1)	Message Monitor	File Edit Setup	o Tools Actions Help		
New Reply Save/Send Clear Browse << >> Resend	downstream face. Cupertino will post volunteer watches at 🔺	Ne	w Open	Delete	Print Send/Receive
	the parking lot.	Folder List	Sent Folder		
To:       Dan Dreager       Position:       Ops Chief, County OES         From:       Mark Patterson       Position:       Ops Chief, Cupertino         Subject:       Status of Stevens Creek Dam       Date:       03/12/2009       Time:       13:10         Message         Be advised that Santa Clara Valley Water District confirmed that the Dam withstood the last aftershock, but recommends periodic observations of its downstream face. Cupertino will post volunteer watches at the parking lot.         Simpsters:       Med Determine       Pasition:       Pasition:	SIGNATURE: Mark Patterson POSITION: Ops Chief, Cupertino /CS213 PacForm connect #20 complete! Message titled "++Status of Stevens Creek Dam" was saved to Outpost (Draft Folder) Reset Exit	In Tray Out Tray Sent Msgs Draft Msgs	U Type From CUPEOC CUPEOC CUPEOC CUPEOC CUPEOC CUPEOC CUPEOC CUPEOC NTS KN6PE NTS KN6PE KN6PE KN6PE KN6PE KN6PE	To         BBS           L05EDC         W6xSC:           XSCEDC         W6xSC:           XSCEDC         W6xSC:           XSCEDC         W6xSC:           XSCEDC         W6xSC:           XSCEDC         W6xSC:           SSEE0C         W6xSC:           SAFEDC         W6xSC:           95035@         WF64B.           95035@         W2KSC:           SMTP:ke         W2LKS           SMTP:jm         W2LKS           CUPEOC         K6FB	Subject CUP181: Request cont CUP183: CVR Cupertin CUP183: CVR Cupertin CUP183: CVR VIS CUP183: CVR VIS CUP183: OVR MSG CU RE: L05:106 - CUP181 CUP185: QTC 1 R MILPITAL RE: 189: got it CUP193: 1st Outpost m RE: got M
	Opdirect Server: Listening	15 Items, 50 Tota	Station ID: KN6PE TI	NC: SANDIEGO-TELNET	- BBS: W2LKS 00:
Reply	3 Outpost-forma message	atted		5	
Date: Time:			→ Ou Mess	tpost age DB	
Message saved and sent 13:10:59	]				

Looking for Opdirect.exe at: Host: LocalHost (127.0.0.1) Port: 9334



#### Processing ics213mm message

Outpost Packet Message Manager	🗆 🗶 New Packet Message
File Edit Setup Tools Actions Help	
New Open Delete Print Send/Receive	File Edit Actions Window Help
Folder List Sent Folder	Print Send Save Delete
New       Open       Delete       Print       Send/Receive         Folder List       In Tray       U       Type       From       To       BBS       Subject         Uut Tray       U       Type       From       To       BBS       Subject       CUP180: ORA Cupertion E0C Operation E0C Operation         Uut Tray       U       Type       From       CUPEOC       XSCEOC       VBXSC1       CUP180: ORA Cupertion E0C Operation E0C Operation         Sent       GUPEOC       XSCEOC       VBXSC1       CUP183: DA Russience C00       CUP180: OAR MS6 E0C Fadao Rec         CUPEOC       XSCEOC       VBXSC1       CUP180: OAR MS6 E0C Fadao Rec       CUPEOC       XSCEOC       VBXSC1       CUP180: OAR MS6 E0C Fadao Rec         CUPEOC       XSCEOC       VBXSC1       CUP180: OAR MS6 E0C Fadao Rec       CUPEOC       XSCEOC       VBXSC1       CUP180: OAR MS6 E0C Fadao Rec         CUPEOC       SSCEOC       VBXSC1       CUP180: OAR MS6 E0C Fadao Rec       CUP180: OAR MS6 E0C Fadao Rec         NTS       KNSPE       95035@       VR648       RE: I05: I06 - CUP181: Request ca       C(2)         NTS       KNSPE       95035@       KFB-2       RE: I07: IT MILPITASCA(?)       RNSFE         NTS       KNSPE       SMTPim </th <th>File Edit Actions Window Help Print Send Save Delete Private Message Bbs: W2LKS From: KN6PE To: Subject: CUP197: Status of Stevens Creek Dan <ics213> ICS213&gt; ICS213&gt; FROM: Mark Patterson POSITION: Ops Chief, County OES FROM: Mark Patterson POSITION: Ops Chief, Cupertino SUBJECT: Status of Stevens Creek Dam DATE: 03/12/2009 TIME: 13:10 MESSAGE: Be advised that Santa Clara Dam withstood the last aftershock, br downstream face. Cupertino will post</ics213></th>	File Edit Actions Window Help Print Send Save Delete Private Message Bbs: W2LKS From: KN6PE To: Subject: CUP197: Status of Stevens Creek Dan <ics213> ICS213&gt; ICS213&gt; FROM: Mark Patterson POSITION: Ops Chief, County OES FROM: Mark Patterson POSITION: Ops Chief, Cupertino SUBJECT: Status of Stevens Creek Dam DATE: 03/12/2009 TIME: 13:10 MESSAGE: Be advised that Santa Clara Dam withstood the last aftershock, br downstream face. Cupertino will post</ics213>
	SIGNATURE: Mark Patterson POSITION: Ops Chief, Cupertino



Bul NTS

Pvt

Urg

Close

- 1. This is currently a prototype!
- 2. Next Steps:
- 3. Need to resolve several open questions
  - 1. Who enters ICS-213 messages? RACES? OES Staff?
  - 2. Form Layout... Message only? Or Message and Reply?



Leveraging Local Area Networks

### Software and Hardware approach

### •AGWPE

- SV2AGW's Packet Engine
- TNC management Program
- Controls TNCs that run in KISS
- Kits and Pre-assembled Interfaces
  - Tigertronics... SignaLink
  - West Mountain Radio ... RigBlaster
  - MFJ... 1275, 1275M
- Or, use a PC's sound Card for packet





Leveraging Local Area Networks



Leveraging Local Area Networks



IP Address: 192.168.1.105



Leveraging Local Area Networks



### Moving Digital Messaging into the EOC Leveraging Local Area Networks

### The Problem:

- Some, not all, Municipalities do not allow PCs on their network that are connected to an external network (Packet?!?!!)
- If your packet machine is on the EOC LAN, congratulations!
- If not...

### The Solution:

Establish your own EOC/Radio Room LAN



Leveraging Local Area Networks

# Wi-Fi capable residential gateway / router

- The device is capable of sharing Internet connections among several computers via 802.3 Ethernet and 802.11b/g wireless data links.
- Look for one with wired and wireless (need to be wired to configure)
- Can co-exit with other wireless environments
- Configure with a unique SSID (Network name, i.e.: CARESEOC)





### ICS213 Message Maker – Demo

- Creating messages
- Browsing
- Sending
- Local operations
- Remote operations



### Thank you Any Questions?



