



USMCC-SPOC Communications Francisco Camacho

U.N./USA Training Course on Satellite Aided
Search and Rescue
19 – 23 January 2009





USMCC-SPOC Communications



Overview -

Current USMCC-SPOC communication methods

- Advantages/ Disadvantages

Expectations/Recommendations





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Current methods – in order of preference

1. AFTN with acknowledgment
2. FAX (Facsimile)
3. E-MAIL



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Requirements for AFTN

1. AFTN Terminal/with connection to the AFTN network
2. Manual/Automatic acknowledgment of each message received from the USMCC.



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Advantages of AFTN

1. Simple setup at USMCC (new AFTN address)
2. Widely available
3. Standard defined for message acknowledgement
 - Used with COCESNA & Dominican Republic



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Disadvantages of AFTN

1. Store and forward system
 - Receipt by SPOC not guaranteed
2. AFTN automatically breaks long messages into pieces
3. Manual acknowledgments by SPOC
 - Requires effort by SPOC personnel
 - Prone to user error



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Requirements for Fax

1. A dedicated phone circuit to be used exclusively for receipt of SARSAT alert messages.
2. A fax connected to the circuit at all times (24 hours, 7 days a week)



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Advantages of Fax (Facsimile)

1. Readily available / easy to set up
 - Plug in fax machine to voice telephone
2. Affordable
 - Fax machine is inexpensive (one time cost)
 - Recurring fee for use of telephone line
3. Delivery by MCC ensures receipt at SPOC office



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Disadvantage of FAX

Tele-
phone
network



Telephone lines
have many
uses



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Disadvantages of Fax (Facsimile)

1. Transmission fails if phone line used for other purposes
2. Transmission fails frequently with some SPOCs
 - due to poor quality (analog) phone lines in some countries
3. Successful delivery to Fax machine does not ensure that SPOC personnel receives the alert



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Advantages/Disadvantages of E-Mail

Advantages

1. The USMCC does not see any advantages to using E-Mail

Disadvantages

1. No automated delivery from USMCC (Internet not secure)
- Manual effort required by USMCC Controller
2. Successful delivery to SPOC email address does not ensure that SPOC personnel receives the alert.



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MSG sequence

```
Untitled - Notepad
File Edit Format View Help
/13230 00000/3660/09 018 1416
/185/CNAM

1. 1. 1. 1. 1. 1. 1.
2. 2. 2. 2. 2. 2. 2.
3. 3. 3. 3. 3. 3. 3.
4. 4. 4. 4. 4. 4. 4.
5. 5. 5. 5. 5. 5. 5.
6. 6. 6. 6. 6. 6. 6.
7. 7. 7. 7. 7. 7. 7.

/13231 00000/3660/09 018 1425
/185/CNAM

/13233 00000/3660/09 018 1515
/185/CNAM

/13234 00000/3660/09 018 1525
/185/CNAM

/13236 13235/3660/09 018 1527|
/185/CNAM

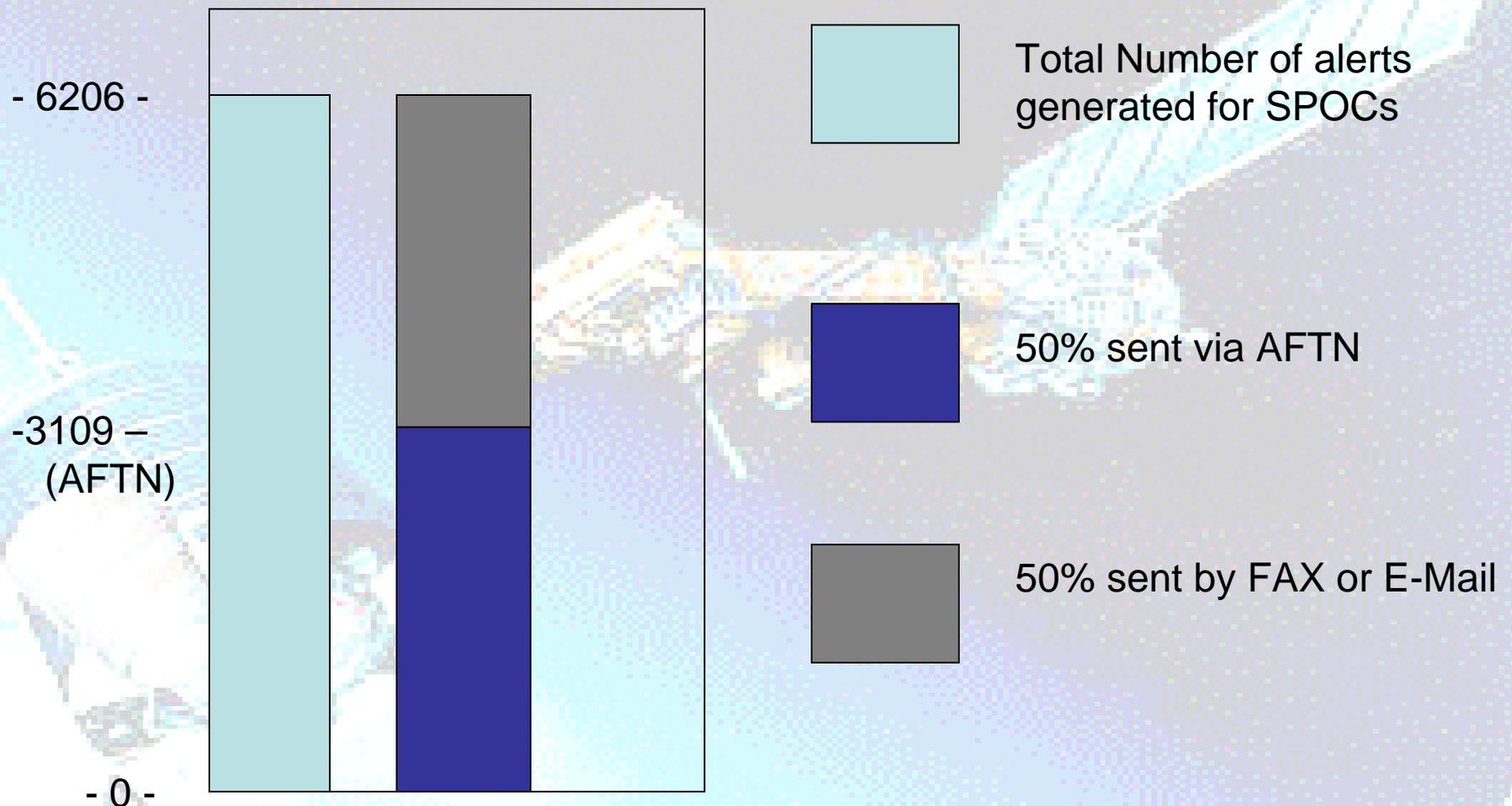
1. DISTRESS COSPAS-SARSAT INITIAL ALERT
2. MSG NO. 13230 USMCC REF 21445
3. DETECTED AT 01 APR 08 2110 UTC BY SARSAT 07
4. DETECTION FREQUENCY 406.1250 MHZ
5. COUNTRY OF ORIGIN REGISTRATION COL HONDUAS
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AFTN/FAX Message Delivery — Sept. to Dec. 2008

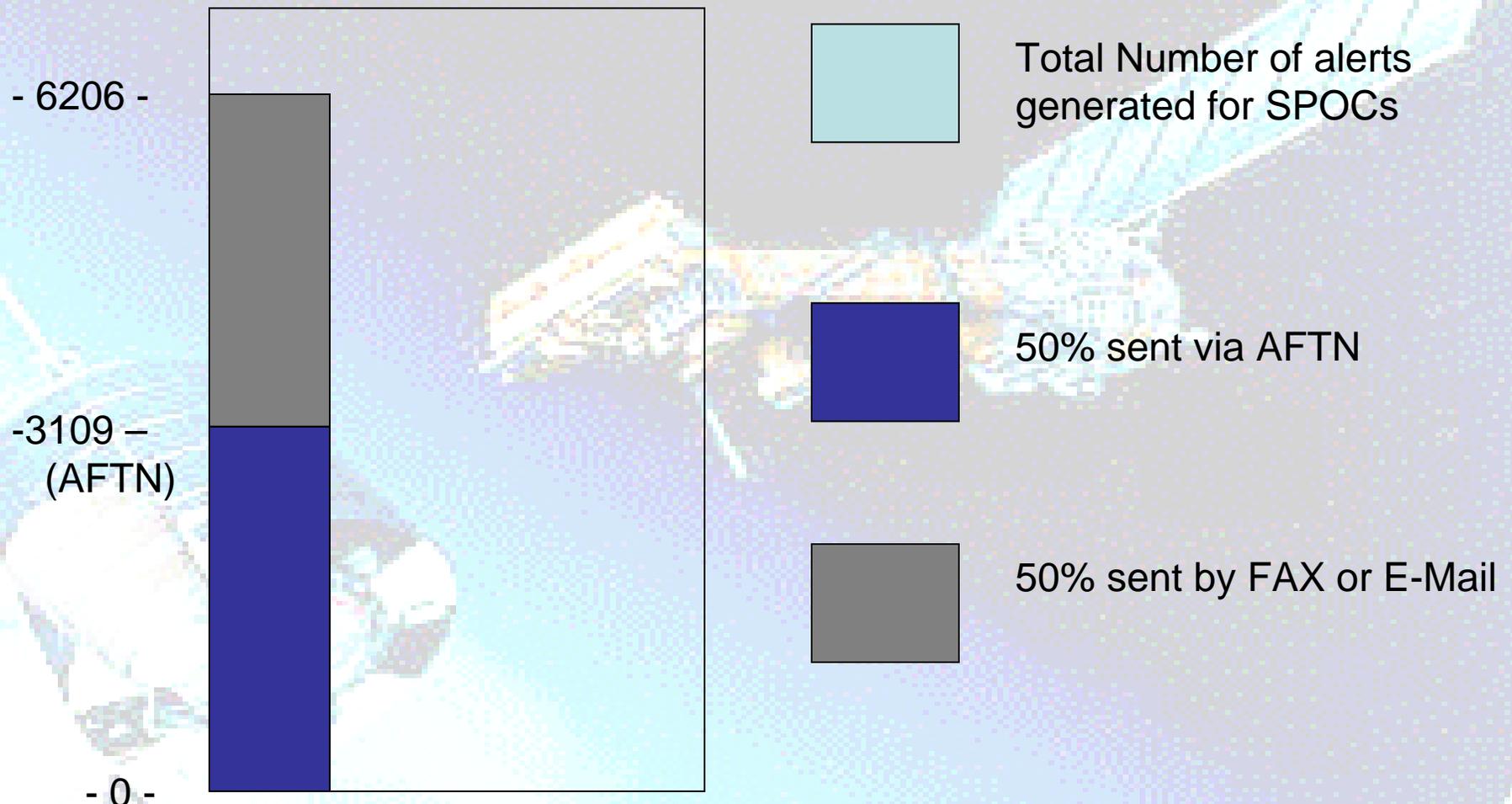




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AFTN/FAX Message Delivery — Sept. to Dec. 2008

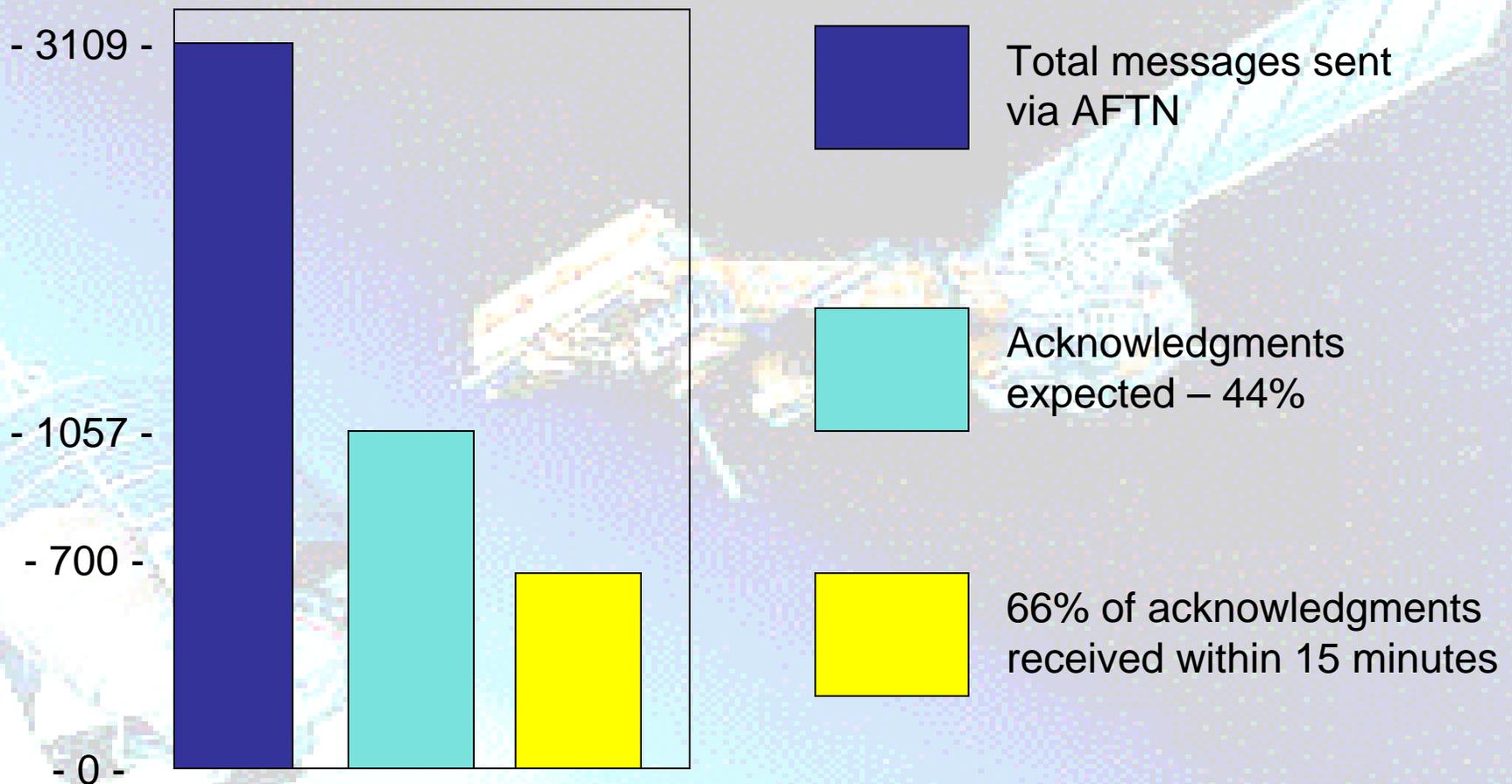




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AFTN Message Delivery — September to December 2008

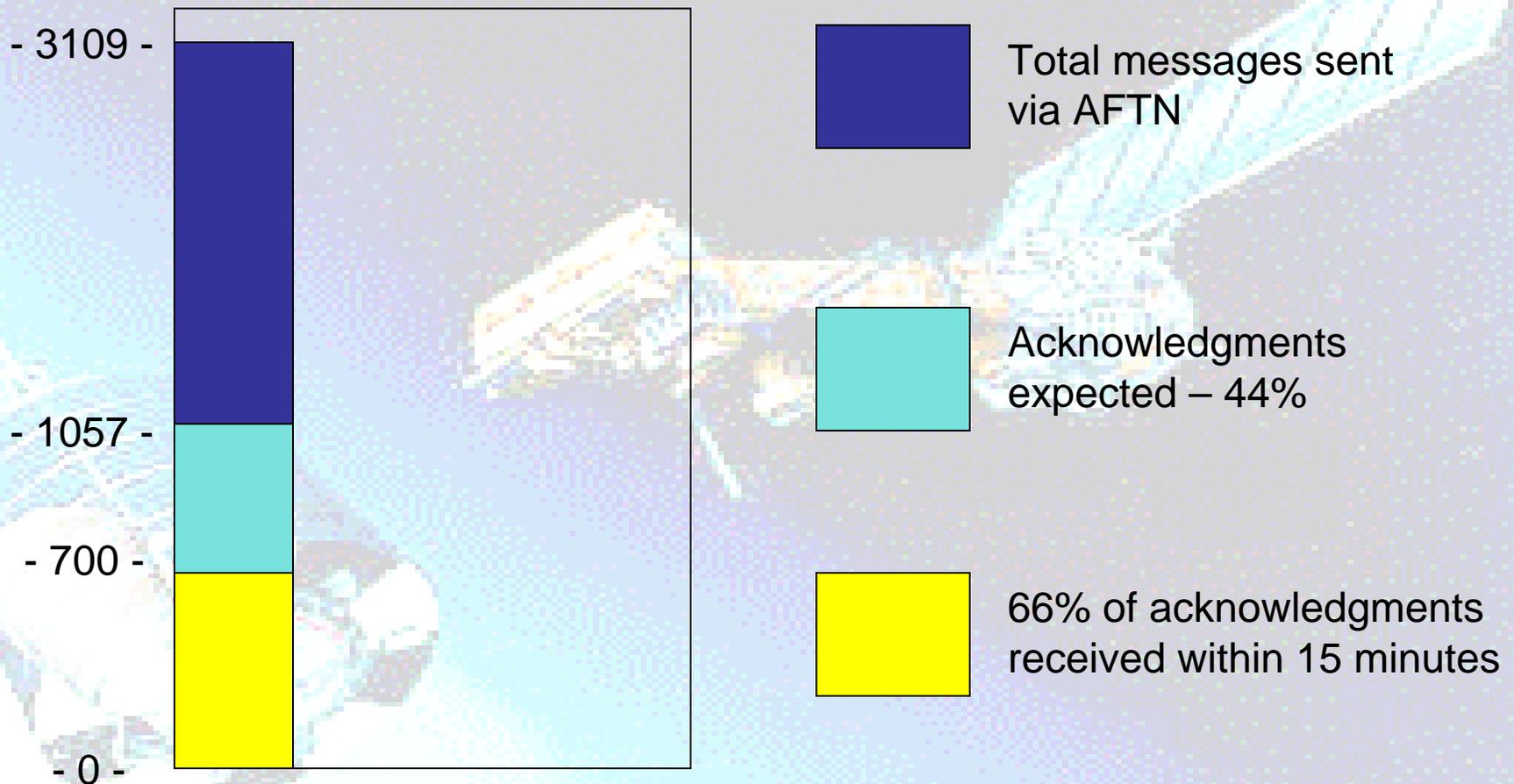




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AFTN Message Delivery — September to December 2008

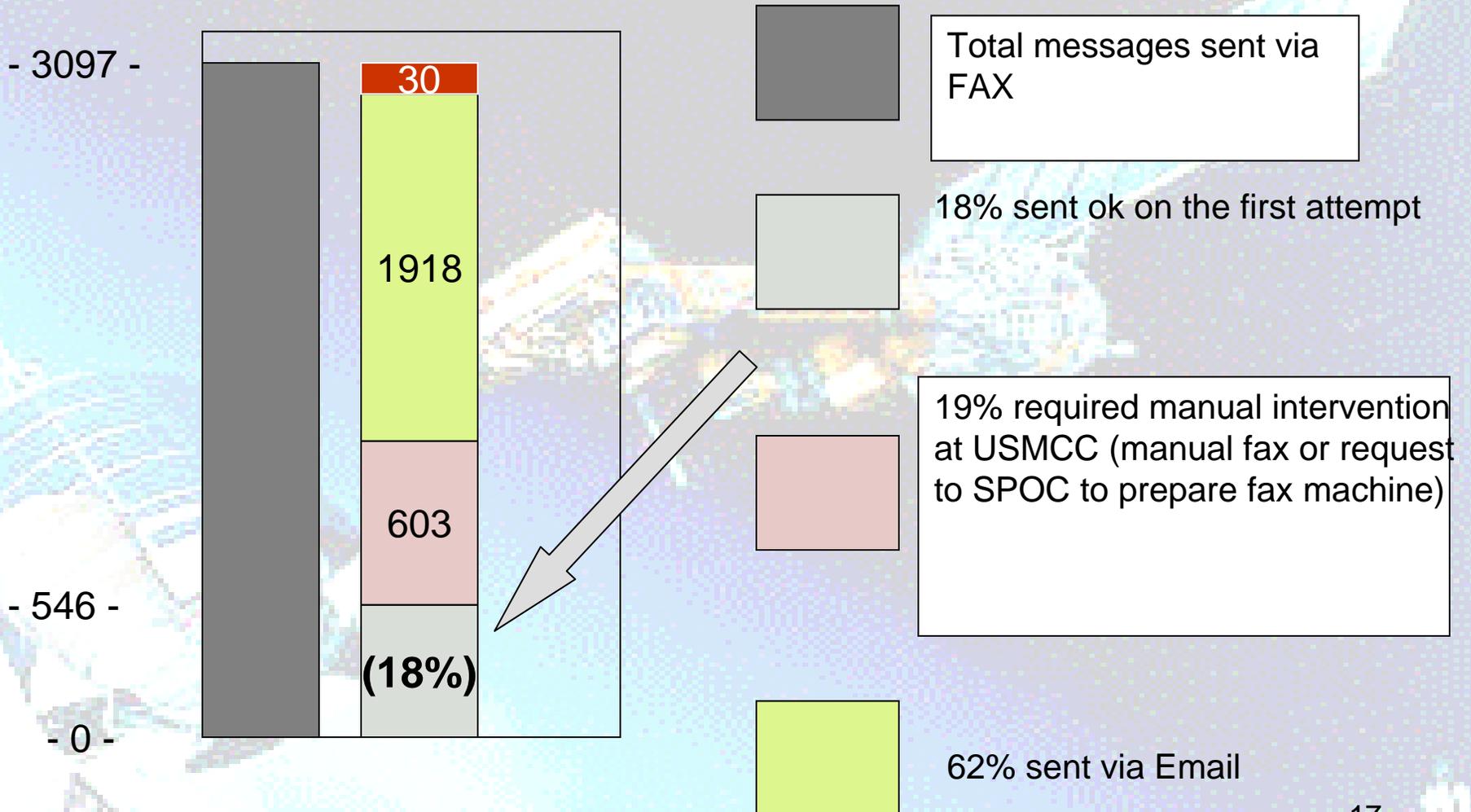




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FAX Message Delivery — Sept. to Dec. 2008





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Delivery acknowledgement expected

Monthly testing required by COSPAS – SARSAT
(per IMO) – all communication links available

Provide date/time of message receipt at SPOC