Joint Staff/J-3 NC3 HS messages

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FOXTROT / SKYKING MESSAGES

SKYKING messages, also known as FOXTROT messages can be heard on the HFGCS frequencies. Their function is not exactly clear. Several documents mention Emergency Action Messages and Aircraft Advisory Messages. It is likely that the Advisory Messages are the Skyking / Foxtrot messages. AMCI33-103 even mention the advisories as FOX messages.

> AIR MOBILITY COMMAND INSTRUCTION 33-103, dated 20 October 2011
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> TRAFFIC ANALYSIS PROCEDURES
> 1.1. Overview. The purpose of traffic analysis is to provide a detailed snapshot of all High Frequency (HF) transmitted messages, Automatic Link Establishment (ALE) links, and phone patches (ZAF). All Emergency Action Messages (EAM), aircraft (ACFT) advisories (FOX), ZAFs, each time an ACFT type is supported, and ALE links, preprogrammed (PREPRO) ZAFs, and Automatic Message Display (AMD) directly dialed ZAFs are totaled for each HF Global Communications System (HFGCS) global station (STN). This data enables leadership, users, potential users, and other agencies to acquire and maintain Situational Awareness (SA) of the type and volume of support we provide to our users.
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> AIR MOBILITY COMMAND INSTRUCTION 33-102, dated 16 June 2014 states in chapter 3.2.5. “Perform all alerts/seizures for the entire Global System. IE: Emergency Action Messages and Aircraft Advisories. Within two minutes of disseminating a message, contact the other NCS to confirm successful alert and transmission on all designated frequencies. They appear to have the highest precedence of any transmission on the HFGCS. These messages appear less frequently than the EAMs.”

Skyking messages have a higher message traffic precedence than other HFGCS traffic.
> All HFGCS traffic will cease for an EAM transmission.
> All HFGCS traffic will cease for a FOXTROT transmission.
> All EAM transmissions will immediately terminate for a FOXTROT broadcast.

The construction of a Foxtrot message is as follows: “Skyking, Skyking, do not answer”. This is followed by a trigraph, timestamp and authentication code.

Here's a sample: ''Skyking, Skyking, do not answer. Papa Tango Three. Time Three Five. Authentication Whiskey November. I say again; Skyking, Skyking, do not answer. Papa Tango Three. Time Three Five. Authentication Whiskey November. Croughton out.''

Do Not Answer
Means that the receiver does not need to react to the message.

Trigraph
All characters of English alphabet can be used. All numerals from 1 through 9, plus zero are used. There are all alpha-character tri-graphs; combinations of alphanumeric trigraphs; and all numeric trigraphs. The trigraphs NEVER change during a FOXTROT cycle.

Timestamp
Two digits that represent the minutes-unit of time of the broadcast. The digits will change to reflect the time of broadcast by a specific station. Sometimes, the stations seem to fudge the timestamp (missing the minute-change.)

Authentication
Conventional Wisdom - the “alpha alpha” authentication does not change during the echo cycle. Common situation now - the authentication does indeed change during the echo process. Yet, there are still instances where the authentication does not change. In multiple FOXTROT situations ("more to follow"), the authentications are static across each message. If the authentication changes in mid-rotation, it seems to change for each grouping in the cycle at the same point.

FDM – FORCE DIRECTION MESSAGE

Besides EAMs other related messages are sent through the HFGCS: Force Direction Messages (FDMs). Although we have no proof, it is likely that they are sent in the same kind of format as EAMs.

The FDMs are described in the Air Force Global Strike Command Instruction 13-5306, dated 26 March 2013.

> 4.3. Remote Targeting Description. MINUTEMAN has the capability to transfer Force Direction Message (FDM) targeting data received over the Strategic Automated Command and Control System (SACCS) directly into the Weapon System Control Element (WSCE) for input, generation, and Remote Data Change (RDC).

EAM – EMERGENCY ACTION MESSAGE

I am sure that every person who regularly listens to HFGCS stations have heard the character strings commonly known as EAMs (Emergency Action Messages). So, what's an EAM ? These definitions of an EAM are taken from the Chiefs of Staff document CJCSI 5721.01E, 13 August 2010 mentions:

> 3. DOD Organizational Messaging Infrastructure
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> b. Nuclear Command, Control, and Communications (NC3) Hybrid Solution (HS)
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> (1) The NC3 HS Emergency Action Message (EAM) architecture supports fixed and mobile EAM injectors and recipients and provides for EAM dissemination to time critical (TC) and non-TC users. TC users include those users who are required to receive messages within the time constraints imposed by the nuclear technical performance criteria and other users determined to be TC by the Joint Staff. In addition to EAM dissemination, the NC3 HS provides transport for the general service (GENSER) traffic up to TOP SECRET OPLAN 8010 (reference h) and nuclear Planning and Execution System (NPES) traffic to and from the Survivable Mobile Command Center community, and those fixed command center sites that employ NPES.
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> (2) EAMs are highly structured, authenticated messages primarily used in the C2 of nuclear forces. EAMs are disseminated over numerous survivable and non-survivable communication systems, including terrestrial and space systems. The NC3 HS is the principal means of dissemination of EAMs in a pre-attack environment. The NC3 HS comprises several existing systems including the Navy’s Nova, the Air Force’s Strategic Automated Command Control System, the Defense Improved Emergency Message Automatic Transmission System Replacement Command and Control Terminal, the DMS, and the Pentagon Telecommunications Center. The primary interface between the NC3 HS and DMS are the National Gateway Centers.

4. Authorities

a. Joint Staff, Directorate of Operations. The Joint Staff/J-3 is the approving authority for declaring EAM messaging systems acceptable and the system of record for EAM dissemination.

All EAMs consist of two parts - A preamble that consists of 6 characters; and the body of the string, which is read as a concatenation of the preamble and the following characters in the string. The first two characters of any preamble are static; they do not change over a period of time. It's these two characters that help you denote the character-count type of EAM that you are hearing.

In counting the characters in an EAM string (including the preamble) you will find that the most common EAM consists of 30 characters, including a 6 characters preamble whose first two characters remain static for a period of time that seems to vary from 26 days to as low as 8 days.

The EAM character-set consists of 32 characters: all 26 characters of the English alphabet and numerals 2, 3, 4, 5, 6, and 7 (six characters). There are no zeros, ones, eights, or nines.
In the variable character-count EAM universe, there are occasions when there are multi-character groupings within the EAM that will repeat in the body of the EAM; and, sometimes maintain relative positions throughout the body as they repeat.

The EAMs are transmitted by OFFUTT, ANDREWS, MCCLELLAN, etc. with a call to MAINSAIL (Mainsail, Mainsail, this is Offutt, Offutt). In early 2016 however the identification of the sender (OFFUTT etc.) changed to tactical callsigns like Hooverdam, Defender, Optimist, etc. Also MAINSAIL is no longer called. They now call ALL STATIONS.

Sometimes an EAM can be transmitted 'for' a callsign or multiple callsigns, in which case the message starts something like this: “For Chewing Gum, for Chewing Gum” followed by the EAM.

Examples:
Optimist sends a 30 chr EAM for Paymaster
All stations, all stations. This is Optimist, Optimist. Break. For Paymaster, for Paymaster. LEX5AV standby, LEX5AV standby, LEX5AV standby, message follows LEX5AV XQDFYQQMMTKYSFHZZUF3FRWR I say again. For Paymaster, for Paymaster. LEX5AV XQDFYQQMMTKYSFHZZUF3FRWR. This is Optimist. Out

Addressee sends a 84 chr EAM
All stations, all stations. This is Addressee, Addressee. Break. APODCT standby, APODCT standby, APODCT standby, message follows APODCT VYXVQMCOZ3EBXC67JXMUTRAMK4IRCX27AAZX34LTYOXUBU2IEF44 INQVYJJW4W4XVVVVPJZNFH6ZIX I say again. APODCT VYXVQMCOZ3EBXC67JXMUTRAMK4IRCX27AAZX34L TYOXUBU2IEF44INQVYJJW4W4XVVVVPJZNFH6ZIX. This is Addressee. Out

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Sources / credits:
UDXF - Utility DXers Forum www.udxf.nl
N&O - Numbers & Oddities www.numbersoddities.nl
WUN - Worldwide Ute News (defunct)
AFGSCI13-5306
AMCI33-103
AMCI33-102

The original articles, written by Jeff Haverlah and Ary Boender, appeared in the monthly newsletter of Worldwide Ute News (1995)

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