DISA COMSATCOM SCOOP

JULY 2012 VOLUME 4 | ISSUE 3

UPCOMING EVENTS

13 August 2012
Army COMSATCOM Users Workshop
Baltimore, MD
http://www.armysatcomworkshop.org/indexarmy.htm

14-16 August 2012
TechNet Land Forces-East
Baltimore, MD
http://www.afcea.org/events/tnlf/east12/intro.asp

29 October – 1 November 2012
2012 Military Communications Conference
Orlando, FL
http://www.milcom.org/

DISA does not formally endorse any non-DISA events. These events are provided for information purposes only.

CHIEF'S MESSAGE

Welcome to the July issue of the Scoop! There is still a lot of movement at the Commercial Satellite Communications (COMSATCOM) Center, including Inmarsat transition and the on-going Future COMSATCOM Services Acquisition (FCSA). Since the implementation, there are 41 awardees, of which 13 are small businesses, on the U.S. General Services Administration Information Technology (IT) Schedule 70 Transponded Capacity, Special Item Number (SIN) 132-54, Subscription Services, SIN132-55, and Custom SATCOM Solutions Small Business (CS2-SB).

In this issue, we feature articles on the update of the Inmarsat transition, specifically the non-validated and expiring legacy services; satellite communications (SATCOM) link performance drivers and the four key service areas; the Defense Information System's Agency (DISA) Mission Partner Conference 2012; and the Enhanced Mobile Satellite Services announcement of the release of its Iridium 9603 two-way global satellite data transceiver.

We also provide final results from our customer satisfaction survey which was launched in April. We thank all those customers who took the time to complete the survey. For those who did not have the opportunity to participate, please look for future e-mail on the next launch. A sneak peek at the analysis indicates an overall increase in satisfaction from the 2011 Survey, but we also know there is room for improvement. The survey results article provides more details.

As always, if there are article topics for upcoming quarterly issues, please let us know by writing to comsatcomscoop@disa.mil with your suggestion. We do our best to select topics we believe are of interest to our customers, and welcome any feedback.

Please enjoy a happy and safe summer. We will be back with our October issue.

— COL Michelle Nassar

DISA MISSION PARTNER CONFERENCE 2012

The Defense Information Systems Agency (DISA) Mission Partner Conference 2012 was held at the Tampa Convention Center in Tampa, Florida, from 7-10 May, 2012. The conference brought together customers, federal agencies, Information Technology (IT) professionals, industry vendors, and subject matter experts (SMEs) who collaborate and support the Department of Defense (DoD) mission.

The Commercial Satellite Communications (COMSATCOM) Center organized a booth to interact and inform users and vendors of COMSATCOM services. The Future COMSATCOM Services Acquisition (FCSA) documentation and customer satisfaction survey were available for those who stopped by and had the opportunity to ask SMEs acquisition, Broadband Global Area Network (BGAN) Remote Access Service (RAS), and Enhanced Mobile Satellite Services (EMSS) questions.

The conference provided opportunities to engage with DISA senior leaders, project leads, action officers of critical program and initiatives, and industry leads. COL Michelle Nassar, the COMSATCOM Center Chief, presented a one-hour "COMSATCOM Center Update" track session with a "Question and Answer" segment following the briefing. The purpose was to provide an overview of COMSATCOM Center functions, activities, and FCSA contract vehicles and timelines update. COMSATCOM Center SMEs also presented information on Broadband Global Area Network (BGAN) Remote Access Service (RAS), and Enhanced Mobile Satellite Services (EMSS) and Distributed Tactical Communications System (DTCS) capabilities, products, and offerings.

The track session was well-attended and participants had the opportunity to engage with COMSATCOM Center SMEs and industry partners on the FCSA transition, available contract vehicles, and Blanket Purchase Agreements (BPAs). There were also discussions on BGAN requirements and the implementation timeline.

For more information on the DISA Mission Partner Conference 2012, please go to the DISA website at http://www.disa.mil/News/Conferences-and-Events.

ANNUAL CUSTOMER SATISFACTION SURVEY RESULTS

In the April issue, we announced the launch of our web-based, annual customer satisfaction survey. It was live from 3 April 2012 to 8 June 2012. The purpose of the survey is to continually look for ways to improve the customer service that we provide so that we can achieve our vision – "Deliver operationally responsive, customer-focused, and cost-effective commercial SATCOM services that enable the Joint Warfighter."

Thank you to those who completed the survey, and to those who did not have the opportunity to complete it, please let us hear from you next time.

Based on our distribution list containing 156 customers (those with active and expired task orders within the past year), we received 48 responses, a 31% response rate. By industry standards, that is a respectable rate and allows for statistically significant data analysis.

There were two types of statements:*

- Overall satisfaction regarding services provided at the DISA-wide level with statements ranging from acquisition process to price of services.
- Specific satisfaction geared towards the services provided by the Commercial Satellite Communications (COMSATCOM) Center (versus greater Defense Information Systems Agency [DISA]) with statements ranging from technical expertise to post-award assistance.

*For all statements, customers are asked to exclude experience(s) related to vendor-provided services.

The survey statements were centered on seven different constructs:

A. OVERALL SATISFACTION: Overall level of satisfaction with commercial satellite communications services at the DISA-wide level
B. ACQUISITION/TRANSITION: COMSATCOM customer awareness of the Future COMSATCOM Services Acquisition (FCSA)
C. BASE REALIGNMENT AND CLOSURE (BRAC): COMSATCOM customer awareness of the BRAC
D. ASSISTANCE: Overall customer satisfaction with COMSATCOM Center's assistance services
E. POST AWARD ASSISTANCE: Level of satisfaction of post award assistance
F. SCOOP NEWSLETTER: Helpfulness of Scoop newsletter
G. CONCLUDING QUESTION: How can we better meet customers' needs

There was an 8% average increase in positive customer responses over the past year. Overall, our customers are

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SURVEY RESULTS continued from page 2

satisfied in all the constructs; however it was clear some frustration was experienced. Much of that can be attributed to the FCSA transition challenges we all faced as we worked through a new strategy. We value the time our customers took to complete the survey. In return, we strive to address the survey data and qualitative comments to continuously implement methods to drive down costs of our service, while increasing customer support, education, and satisfaction.

Again, we thank you for taking the survey and please look for future communications regarding the next survey. If you would like to discuss the results more specifically or have additional feedback, please send an e-mail to the COMSATCOM Scoop at, comsatcomscoop@disa.mil. We look forward to hearing from you!

THE EMSS INDUSTRY PARTNER
ANNOUNCES RELEASE OF THE IRIDIUM 9603

The Enhanced Mobile Satellite Services (EMSS) industry partner and service provider, Iridium, has announced the release of its Iridium 9603 two-way global satellite data transceiver, the next level of innovation in the Iridium family of products. The Iridium 9603 reduces the size and weight considerably and is one-fourth of the volume, one-half the footprint and one-third the weight from its predecessor, the Iridium 9602 without sacrificing any performance in the Iridium Short Burst Data (SBD) service. The device weighs 11 grams and has the diminutive dimensions of 31.5mm x 29.6mm x 8.1mm – a small package that can fit in most desired form factors and serves even the most covert of operations.

The Iridium 9603 is not currently offered on DISA Direct Order Entry (DDOE), but customers may purchase the device from Iridium resellers. For a list of Iridium resellers, please visit the Iridium website at www.iridium.com and click on, "How to Buy." Once a government customer purchases the device, they must purchase secure EMSS SBD service for data transceivers, through the DDOE website at https://www.disadirect.disa.mil/.

EMSS provides secure global Satellite Communication (SATCOM) services under the Commercial Satellite Communications (COMSATCOM) Center at DISA. EMSS offers a breadth of services to include voice, secure voice, Distributed Tactical Communications System (DTCS), messaging, and data to Department of Defense (DoD), other Federal departments, agencies, state and local governments, and approved foreign and allied Government users. EMSS offers SBD with automatic billing using the "usage based tiered" pricing structure. The pre-negotiated SBD service are exceptionally competitive with the commercial sector and also offers two key advantages – users have the flexibility of tiered data usage, to include UNLIMITED data, and the added assurance of secure communications through the EMSS Gateway.

SBD Costs for FY12* (Includes 2.0% DITCO fee)

$81.60 one-time activation fee
$133.29 per month - Unlimited
$66.99 per month - up to 100 kb
$26.19 per month - up to 30 kb
$10.89 per month - Inactive

For pricing updates, please check DDOE at https://www.disadirect.disa.mil/.

The EMSS 24/7 Help Desk that is available to answer all customer questions about the full suite of EMSS devices, services, features and accessories.

EMSS Help Desk (24/7)
CML: (877) 449-0600 | DSN: (312) 282-1048 | Email: customer.service@gdc4s.com

EMSS Program Office
CML: (301) 225-2800 | DSN: (312) 375-2800 | Email: Disa.meade.ns.mbx.emss-program-office@mail.mil

The EMSS Program Office is seeking customers to share their experiences with how EMSS devices and services provided reliable and superior communications in an austere environment.

The EMSS Program Office is most interested in stories where the EMSS global services helped save the day. If you would like to share your story, please reach out to the EMSS Office.

Iridium 9603

INMARSAT TRANSITION UPDATE: INMARSAT NON-VALIDATED AND EXPIRING LEGACY SERVICES

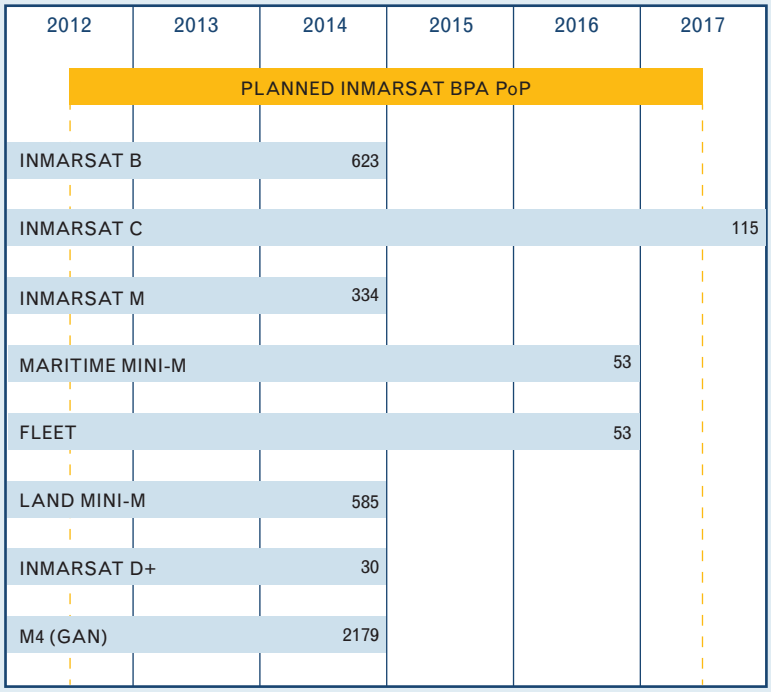
The Inmarsat Indefinite Quantity / Indefinite Delivery (ID/IQ) contracts, which supported Inmarsat Broadband Global Area Network (BGAN) and Legacy mission requirements over the past 10 years, expired on 5 June 2012. To ensure continuity of services, the Defense Information Systems Agency (DISA) initiated an Inmarsat Bridge contracts with a one-year base period ending 5 June 2013 and two six-month options thereafter. Meanwhile, the transition of on-going Inmarsat Communications Service Authorizations (CSA) to new General Service Administration (GSA) SIN 132-55 is underway. Success of the transition depends crucially on MILDEP cooperation to discontinue: (1) non-validated requirements and (2) expiring legacy service requirements.

Non-Validated CSAs: The Commercial Satellite Communications (COMSATCOM) Center is working with MILDEPs and the functional community to "validate" on-going CSAs. This is important both to establish continuing need and ensure communications with end-users to avoid disruptions during service transitions. The DISA Direct Order Entry System (DDOE) database reports over 7,000 Inmarsat CSAs; over 3,500 of these have yet to be validated and contain obsolete contact information or represent services no longer in use. If these CSAs are no longer required, a discontinue order must be submitted using DDOE. This action is necessary for two reasons: (1) it instructs DISA to release a contracting notice to the vendor to end the service and prevent unintended future charges, and (2) it helps provide a better picture of the Global Information Grid and Department of Defense (DoD) bandwidth usage by purging unused CSAs from DISA databases.

As the COMSATCOM Center transitions CSAs, we are requesting each MILDEP and functional community representative take action to submit discontinue orders by June 2013. A breakdown of the non-validated CSAs by Services type can be provided upon request.

Expiring Inmarsat Legacy Services: The Inmarsat I3 satellites have been in inventory since 1996 and provide global Inmarsat legacy services, mainly at low speeds and data rates. Inmarsat is retiring this fleet as it continues to promote BGAN and next generation Mobile Subscription Services (MSS). In FY11, Inmarsat released a schedule to notify the user community of the company's planned phase-out timelines of specific legacy services. As we monitor the ordering and usage of these legacy services, we see a decline of their use within DoD.

In 4QFY12, DISA plans to award a Blanket Purchase Agreement (BPA) dedicated to legacy services only to ensure capabilities are available until scheduled expiration. Inmarsat plans to phase out five legacy services by the end of December 2012: Inmarsat B, Inmarsat M, Land Mini-M, D+, and M4. Only Inmarsat C will continue beyond the BPA period of performance.



Planned phase out of Services beginning December 2014

Some legacy services will be available through an Aeronautical and Maritime Inmarsat services BPA. These include all Aeronautical legacy services (such as Swift 64, Aero H and Aero H+), as well as Maritime services such as Maritime Mini-M, Fleets 33, 55, and 77.

For those customers looking to fulfill a capabilities void, now is the time to budget and plan for BGAN services prior to the phase out of Inmarsat's legacy services. Customers would have to incur up-front costs of new BGAN terminals, but would benefit from faster throughput speeds and more robust capabilities. BGAN BPAs will offer competitive commercial pricing.

SATCOM LINK PERFORMANCE DRIVERS

There are four key factors that can generally impact quality levels of Satellite Communications (SATCOM) solutions and ultimately affect the outcome of user requirements being met. The focus of this article is to highlight the importance these service guidelines for the Commercial Satellite Communications (COMSATCOM) Center audience. The four service areas do not apply to all SATCOM user requirements, but generally include:

1. SATCOM link quality
2. Satellite coverage
3. SATCOM link capacity and system connectivity
4. SATCOM link availability and reliability

1 Link Quality:

1-1 Data Requirements: Data transmitted over a SATCOM link is vulnerable to system errors which compromise communications quality. Measures such as the Bit Error Rate (BER) and Packet Erasure Rate (PER) indicate the probability of error over the link. The Commercial Satellite Service Request (CSSR) document, which is used to capture customer information and requirements, specifies the minimum acceptable BER or PER level to satisfy each requirement.

Receiving modem baseband link performance is measured by the Bit Energy-to-Noise density ratio (Eb/No) and can be computed from SATCOM link budgets. For a SATCOM link to perform satisfactorily, the proposed link must offer an Eb/No value greater than the minimum threshold Eb/No needed by the modem to support the target BER. The SATCOM link margin is defined as the difference between the proposed Eb/No (required) and the threshold Eb/No. If this link margin is negative, then the SATCOM link will not have sufficient power resources to close the link.

The link margin must be sufficiently high to support the target BER, enhance link robustness, and counter the effect of rain and other propagation effects as well as antenna pointing errors and collateral degradations. SATCOM solutions should include a link margin to ensure user requirements are supported.

1-2 Voice and Video Requirements: Voice and video quality is measured by the Mean Opinion Score (MOS). MOS is a scale measure based on test-user feedback, ranging from 1 (impossible to communicate) to 5 (comparable to a good, face-to-face conversation). For Voice over IP (VoIP) and web-based video applications, the Quality of Service (QoS) is another metric used to control of resource reservation. Quality of service comprises requirements on all the aspects of a connection, such as service response time, loss, signal-to-noise ratio, cross-talk, echo, interrupts, frequency response, loudness levels, etc. In this context, the QoS attempts to measure the level of user satisfaction. As a best practice, proposed SATCOM solutions should focus on ensuring MOS and QoS targets are met to ensure user requirements are met.

2 Coverage:

The effective coverage area of a satellite transponder is defined by its footprints: the transponder G/T (d/K) footprint and the transponder Equivalent Isotropically Radiated Power (EIRP) footprint. These are land/sea surfaces over which the transponder G/T and EIRP are projected. These projections are typically represented as contour lines mapping various G/T and EIRP values.

To ensure good communications, both the transmit and receive sites must be within their respective transponder footprints (satellite G/T footprint for the up-link and satellite EIRP footprint for the receive site).

For the same link capacity, a better set of satellite footprints (space segment parameters) can be traded-off for cheaper ground resources (i.e., antennas, High Power Amplifiers [HPA], receivers), a better end-to-end link performance, or a higher link margin. The COMSATCOM Center considers space-segment resources as a premium asset in most satellite communications links and generally endorses solutions that offer robust links with optimized satellite G/T and EIRP footprints whenever possible, along with efficient modulation and coding schemes capable of supporting the user requirement with adequate link margins.

3 Capacity and System Connectivity:

Most applications and baseband requirements (e.g., web access, text, audio, image, video file transfers) can be converted to data rates in bits per second (bps). The data rate requirement and a connectivity matrix are usually specified in the CSSR document mentioned previously in this article. An efficient coupling of the data rates and the modulation and coding methods usually yield optimized bandwidth (MHz) solutions without compromising link quality. The COMSATCOM Center generally favors solutions that support the required applications, link capacity and network connectivity, coupled with efficient modulation and coding schemes.

4 Link Availability and Reliability:

Link availability is another key performance driver in satellite communications link design. For Ku and Ka bands, rain attenuation and depolarization effects are the dominant factors in the determination of end-to-end link availability. Other contributors to link outage include equipment failure and sun transit. The desired link availability targets for various types of satellite communications links are listed in the CSSR document. The COMSATCOM Center recommends solutions that offer adequate margins and schemes to protect the link against downtime due to rain, propagation effects, equipment failures, and power outages.