



MENA Industry & Government as Satellite Service Customer: Are there Gaps in Delivery?

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David Moss
Executive Manager Product Management
Thuraya Telecommunications Company

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Thuraya Telecommunications Company

Overview of Thuraya Telecommunications Company

Thuraya offers satellite-based telecommunication solutions (voice and data) across satellite, GSM & GPS platforms

Company

- Leading MSS operator based in United Arab Emirates
- Brand new state-of-the-art satellite constellation
- Highly flexible and dynamic
- Coverage across 2/3 of the globe with 2 GEO satellites at 44° E and 98.5° E
- 300,000 subscribers

Company

VOICE

Handset / Rural Telephony/ Maritime Terminals

DATA

High Speed Data/ Maritime Terminals Lease

VAS

NettedComms
Discrete SIM and Encryption
Location Based Services

Coverage Map



- Thuraya delivers communications in more than 140 countries in **Africa, Europe, the Middle East, Asia and Australia**

Thuraya Satellite Architecture

Key Advantages of our Satellite Architecture

Spacecraft architecture allows dynamic response to traffic requirements to avoid congestion in hot spot areas. 20% of power can be allocated into a single spot beam.

Spacecraft Architecture

- Designed to operate for a **minimum of 12 years up to 17 years.**
- Has the capability to **dynamically distribute the RF power** uniformly and non-uniformly over the coverage area to cope with the traffic demand.

Onboard DSP is capable of:

- **Providing up to 25,120 simultaneous equivalent voice channels**
- **Processing 640 sub-bands** (156.25 KHZ), each contains 5 FDM carriers with spacing of 31.25KHZ
- **Reconfiguring the number of beams, beam sizes and beam location in orbit**
- **Dynamically assigning different sub-bands with different power levels to different beams** to cope with the traffic demand
- **Forming more than 500 beams** in orbit at any time during the satellite life
- **Reconfiguring the beam size and location** in orbit
- **Reusing the spectrum more than 30 times** over the entire coverage area

Thuraya Satellite



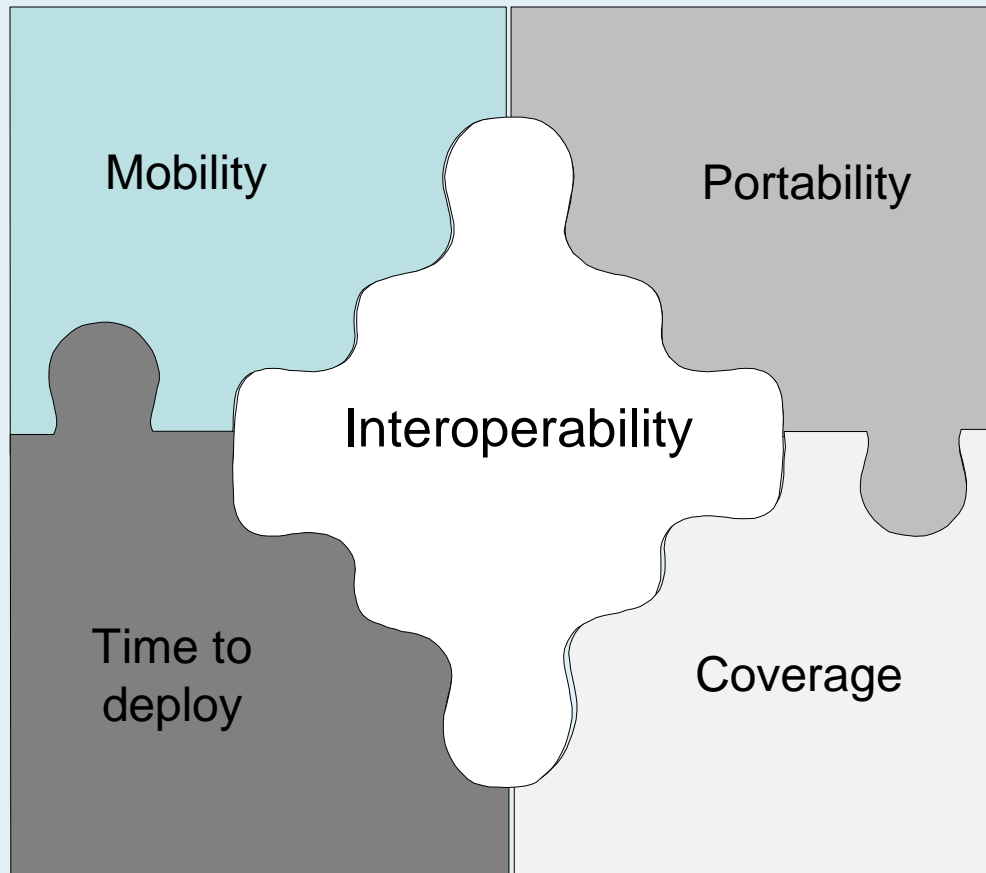
THURAYA 

Gap Analysis

Are there any Gaps in Delivery?

While there has been considerable progress in the satellite communications solutions and their delivery to the customers, there are still some significant gaps

Major gaps in delivery of satcom solutions to the government users



How can Thuraya bridge this Gap?

Thuraya – Bridging the Gap

Mobile Satellite Solutions from Thuraya can effectively bridge the existing gaps in the delivery of satellite solutions to the users

Mobility

- Key users who require mobility include:
 - Military
 - Homeland Security
 - Disaster Management
 - Media
- Mobility is one of the most important things these government customers require.
- Ability to make and receive voice calls or send and receive data on the move is absolutely critical for these customers.

- Mobility is the essence of all Thuraya solutions for voice as well as data
- Be it Thuraya satellite handsets or Thuraya data solutions, all ensure extreme mobility to cater to the critical requirement of these government users.



How can Thuraya bridge this Gap?

Thuraya – Bridging the Gap

Immediately deployable user terminals is extremely critical for a variety of time critical applications.

Time to Deploy

- Existing satellite solutions for the government segment have major limitations:
 - Time to deploy is usually many months
 - Licensing issues also delay the deployment
- Immediate deployment is critical for disaster management activities and traditional satcom solutions are certainly not suited for such mission critical applications
- Ability to make and receive voice calls or send and receive data on the move is absolutely critical for these customers.
- All Thuraya solutions are immediately and instantly deployable.
- Just switch on the user terminal, face it towards the satellite and hook on to the voice or data network within minutes.
- All solutions best suited for time critical applications.

How can Thuraya bridge this Gap?

Thuraya – Bridging the Gap

Portability for a variety of user segments, especially defense and media users is a key enabler

Portability

- Existing satellite solutions for the government segment are fixed and not portable
- Portability is absolutely critical and unavoidable for a majority of government users
- Media as well as defense users want lighter and more mobile and portable units.
- Portable satellite communications units means more powerful forces in the network centric warfare.
- All Thuraya solutions are extremely light weight and highly portable
- Thuraya boasts of most innovative products:
 - World's smallest (130 gms) satellite handset
 - World's smallest (A5 size) mobile satellite broadband terminal
 - World's toughest satellite handset

How can Thuraya bridge this Gap?

Thuraya – Bridging the Gap

Pan regional and out-of region coverage, independent of ground infrastructure is most important feature of Thuraya solutions

Coverage

- Existing satellite solutions for the government segment have a limited coverage area
- Present day requirement include government assignments (military or non-military) outside the country. Pan-regional and out-of-region coverage has become very essential.
- In such scenarios, inability to use the existing satcom solutions is a big limiting factor
- Thuraya covers 2/3 of the globe with two geo-stationary satellites.
- Thuraya has coverage in more than 140 countries worldwide.
- The coverage extends all the way from Europe, Africa, the Middle East, Asia and Australia.
- Government users can use service anywhere in the coverage area without any additional charges.

How can Thuraya bridge this Gap?

Thuraya – Bridging the Gap

Mobile Satellite Solutions from Thuraya can effectively bridge the existing gaps in the delivery of satellite solutions to the government segment

Interoperability

- Different government users have different communication equipment and systems and in most cases these are not interoperable
- Situation becomes worse during coordination of disaster management activities or during any military exercise where due to usage of different communication equipment interoperability becomes impossible
- Effective disaster management is a key element in good governance. Enabling seamless communication among the different rescue teams on the ground is the key enabler
- Thuraya NettedComms solution has been designed to meet these mission critical disaster management requirements and ensures absolute interoperability.
- NettedComms integrates disparate voice services into a single coherent network to effectively enable communication in a closed user group that can operate independently from local terrestrial communications services.
- A unique government solution that enables you to talk instantly to a pre-defined group of users at the press of a single button by integrating different communications technologies (Thuraya Sat, GSM, PSTN and Radio) into a coherent IP-based network for reliable voice communications.

(Refer to the next presentation for details)

Conclusion

Thuraya bridging the Gaps

- While there have been considerable developments in the broadband satellite industry and associated hybrid wireless applications, significant gaps still exist in the delivery of these solutions to the end users especially the government sector
- These gaps are currently addressed by the solutions provided by the Mobile Satellite Service providers like Thuraya.
- Mobility, Portability, Interoperability and Coverage can no more be a limiting factor for the government satellite communication users.



David Moss

Executive Manager Product Management

Thuraya Telecommunications Company

PO Box 283333, Dubai, UNITED ARAB EMIRATES

Tel: +971 4 4488 830

Mobile: +971 50 6335 812

Fax: +971 4 4488 666

Email: d_moss@thuraya.com