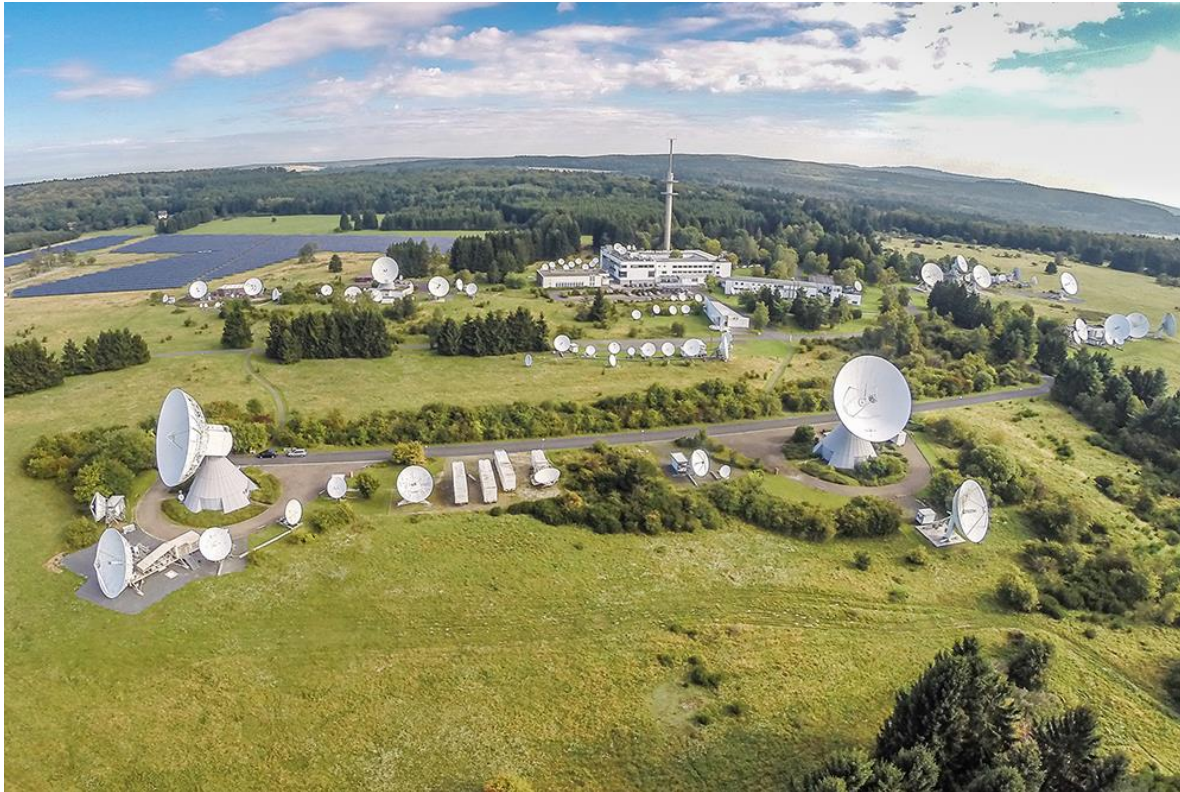


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Media Broadcast Satellite (MBS) is operator of Germany's largest teleport and a long-standing service provider of customized communications solutions for government organizations and the military.

For an agile and robust network of temporary or fixed sites as well as mobile units, MBS offers scalable and mission-proven communication solutions.

In addition to satellite connectivity, MBS uses fiber, radio and cellular links that enable a range of applications on land, air and sea.

MBS communications solutions are hardware-independent and can be integrated into existing systems and flexibly adapted to changing requirements.

From our Teleport in Usingen near Frankfurt, customers can reach regions across Europe, Middle East, Africa, Asia and the American continent with maritime coverage for the Atlantic, Baltic, Mediterranean and Indian Oceans.

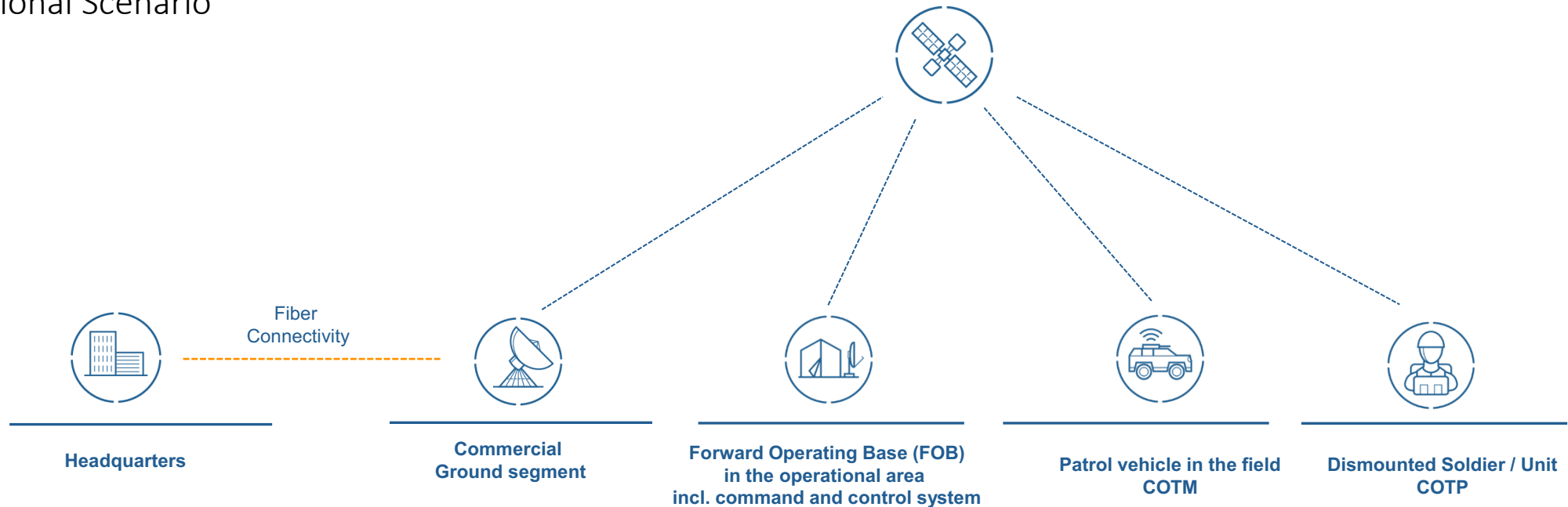
MBS features high-availability, EU/US security compliant and ISO27001 (cyber security) certified infrastructure and services, ranging from Military-off-the-shelf services to fully managed and mission tailored communications solutions.

Slide #02 Operational Scenario



- MBS enables connectivity in government use frequency bands (X-band & MIL Ka-band) as well as commercial bands (C-, Ku- and Ka-Band) and through its worldwide fiber network
- This enables an array of applications such as connectivity for theatres of operation, interconnection and interoperability of institutional or defence sites/network entities, command & control (C2), Intelligence, Surveillance and Reconnaissance (ISR), border control, SOF missions as well as various types of communications-on-the-move/pause for land, air and maritime missions

Operational Scenario



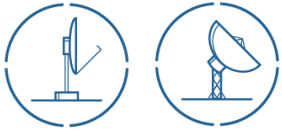


- For highly mobile and rapidly deployable units, we offer pre-integrated communications-on-the-move (COTM) and communications-on-the-pause (COTP) as well as stationary solutions for land-, sea-based & airborne operations

VSAT Terminals / Antennas				
Categories	COTM Communications-on-the-Move	COTP Communications-on-the-Pause	SATCOM	
Types / Size	Mobile Up to 100 cm	Mobile Up to 45 cm	Deployable 1m - 1,8m	Stationary From 2,4m
Standards	MILSATCOM COMSATCOM	MILSATCOM COMSATCOM	MILSATCOM COMSATCOM	MILSATCOM COMSATCOM
Platforms	  			

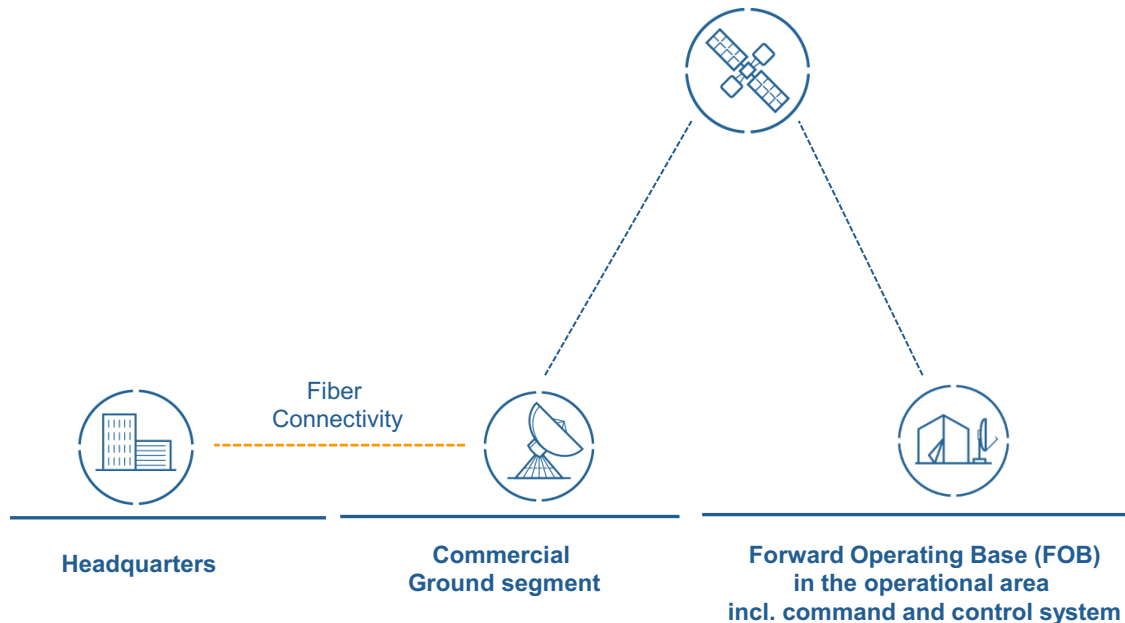
COMSATCOM = Commercial SatCom | C-, Ku-, Ka- Band
MILSATCOM = Military SatCom | X- & MIL Ka-Band

Slide #04 Deployable and stationary SATCOM



Operational Scenario:

Enabling connectivity between the Forward Operating Base (FOB) and the headquarters via the commercial ground segment



Deployable and stationary SATCOM

For highly available and robust communications in the theater, enabling e.g. connectivity between the Forward Operating Base (FOB) and mobile units. As well as connecting the FOB to the Headquarters via the commercial ground segment enabling reachback connectivity.

Depending on the application, both deployable and stationary antennas are available in different sizes.

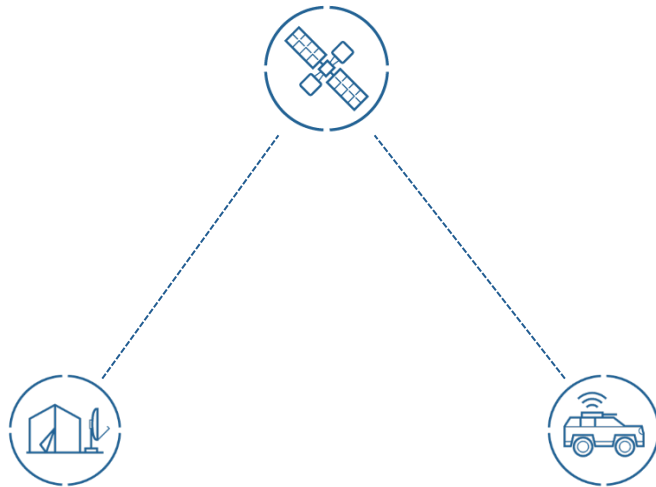
Up to several hundred Mbps throughput depending on the mission requirements.

MILSATCOM/COMSATCOM



Operational Scenario:

Connecting Patrol vehicles in the field with the Forward Operating Base (FOB) & command and control system



Forward Operating Base (FOB)
in the operational area
incl. command and control system

Patrol vehicle in the field
COTM

COTM – Communications-On-The-Move

Mobile communications capability for data and video transfer to provide ISR & C2 support to units while on the move.

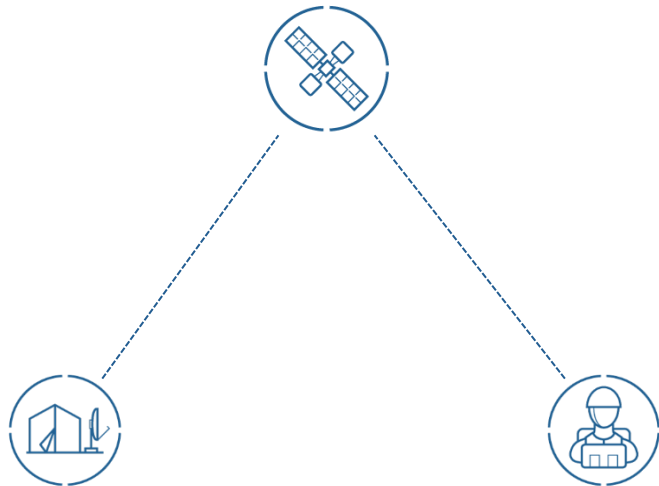
COTM Terminals

- Enabling broadband connectivity on the move capable of delivering data speeds up to 5×2 Mbps
- Installation and use on moving vehicles
- Automatically acquires connection to a satellite
- Maintains communication while vehicle is moving
- Platform independent
- Low-profile installation
- Reduced energy consumption and weight
- MILSATCOM/COMSATCOM



Operational Scenario:

Connecting the Forward Operating Base (FOB) with the Dismounted Troops/ Units beyond line of sight



Forward Operating Base (FOB)
in the operational area
incl. command and control system

Dismounted Soldier / Unit
COTP

COTP – Communications-On-The-Pause

Lightweight and compact terminals for temporary use in a fixed location to enable broadband communication on the pause.

COTP Terminals

- Lightweight, compact form factor and highly portable
- Rapid and autonomous deployment
- Automatic or assisted pointing to connect to a satellite
- Designed for temporary use in a fixed location
- Enabling Broadband Connectivity with speeds up to 10×3 Mbps
- Integrated antenna/modem unit
- Stand alone operation (battery enabled)
- MILSATCOM/COMSATCOM