

EBU Distribution network

WBU-ISOG FORUM , Zagreb
October 24-25, 2011



Contents

- The EBU network
 - News Exchange
 - Distribution network

History of the EBU network

From analogue to digital



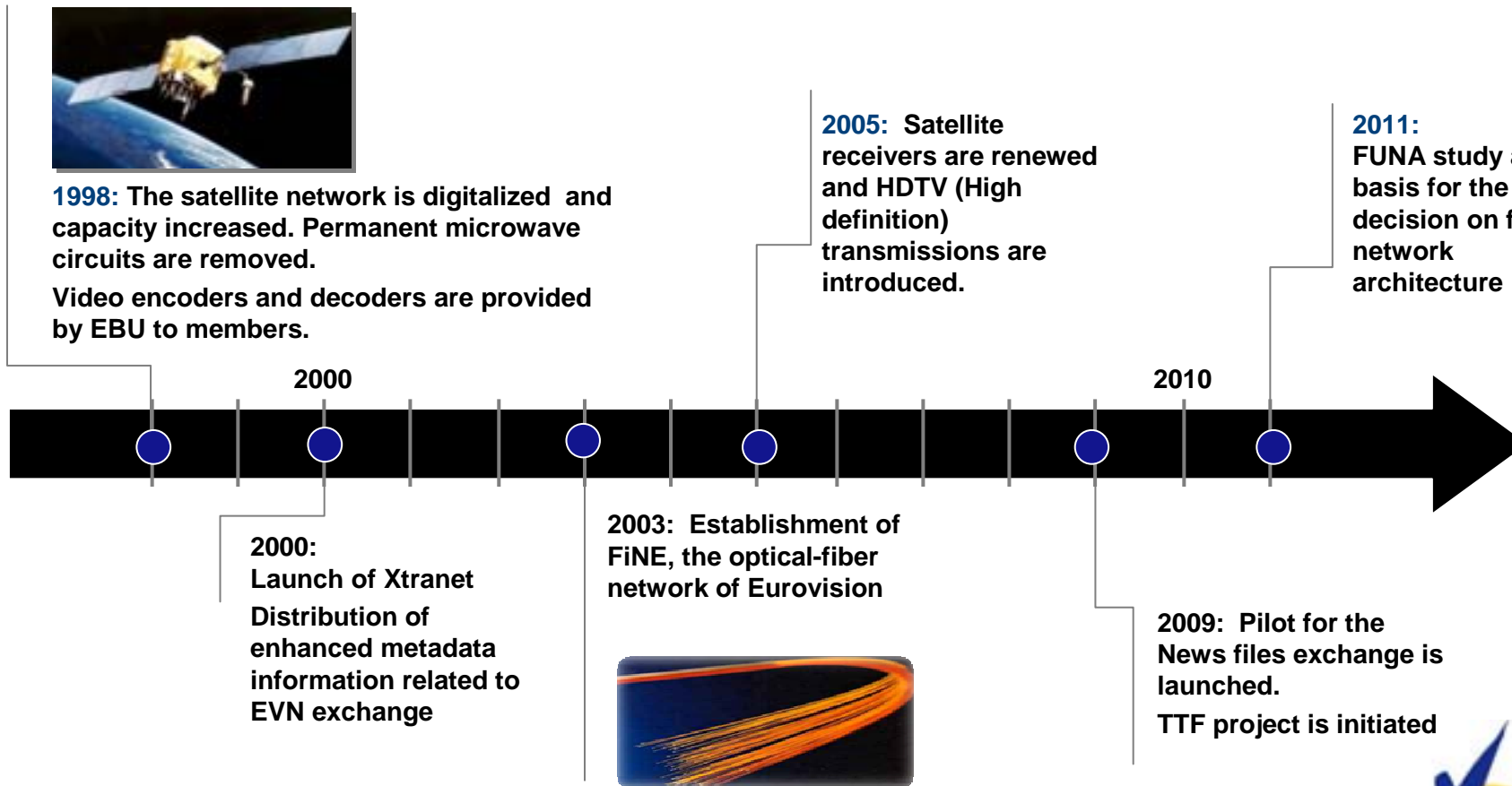
1998: The satellite network is digitalized and capacity increased. Permanent microwave circuits are removed. Video encoders and decoders are provided by EBU to members.

Migration to HD

2005: Satellite receivers are renewed and HDTV (High definition) transmissions are introduced.

Next cycle

2011: FUNA study as a basis for the decision on future network architecture



2000

2010

2000: Launch of Xtranet
Distribution of enhanced metadata information related to EVN exchange

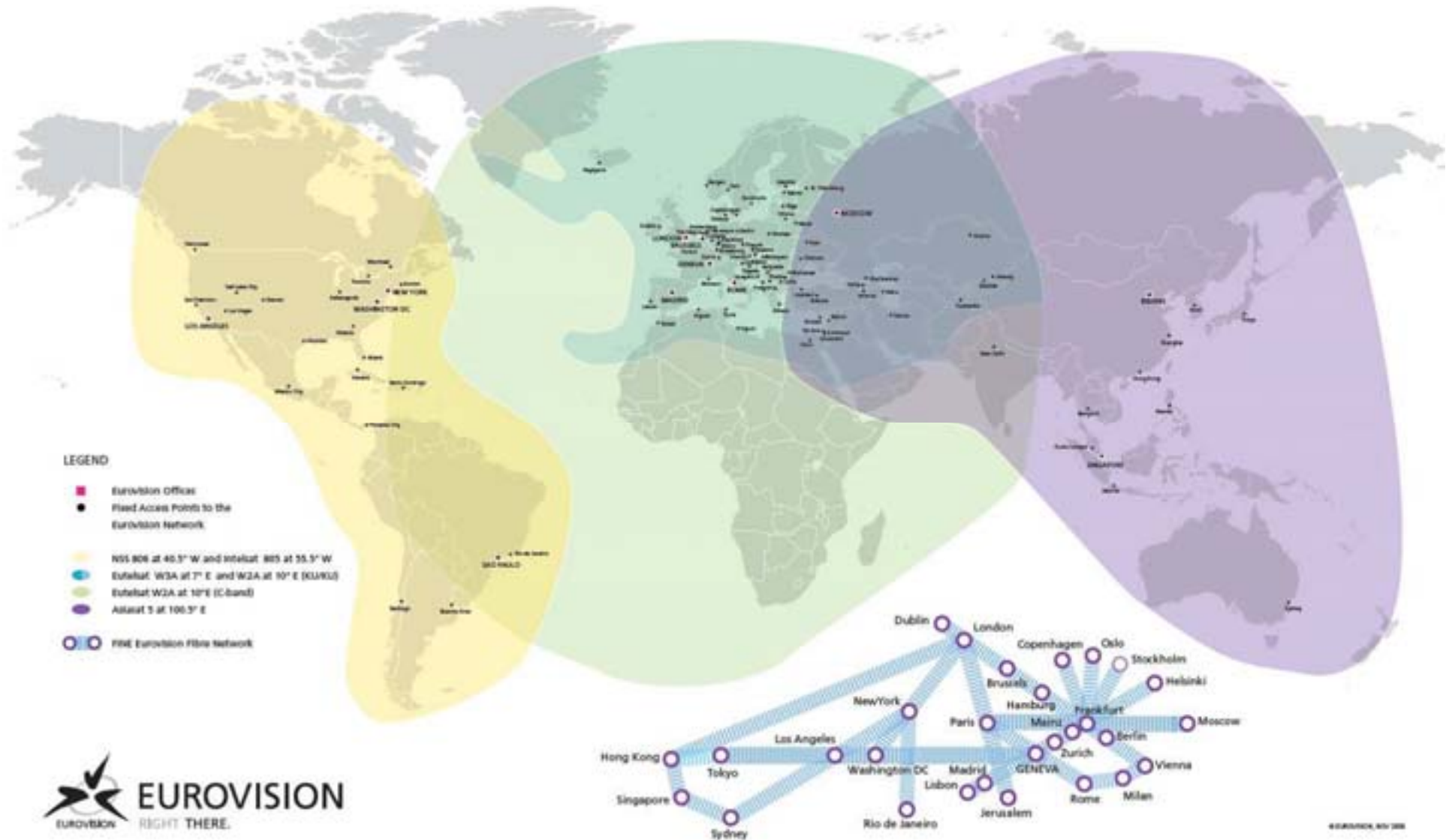
2003: Establishment of FiNE, the optical-fiber network of Eurovision



2009: Pilot for the News files exchange is launched.
TTF project is initiated



Current network coverage



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- The EBU network
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News Exchanges

- **Making order out of chaos**
- **Largest news content exchange in the world**
- **Over 42,000 reports transmitted every year**
- **24/7 operation**



News and Radio Exchange system

Mandatory Eurovision activities

- Main drivers for evolution:
 - Aging satellite earth stations
 - Reduction of operating costs
 - Fibre available from main origins of traffic
 - Most of content exchange by files
- Evolution has to be coordinated with members

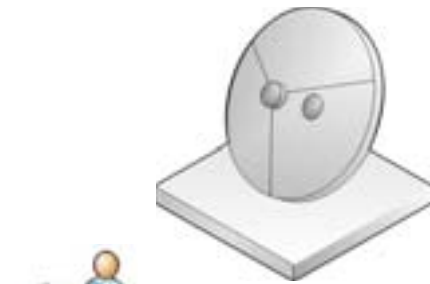
News and Radio Exchange system

Summary for the development

- A system to exchange files is currently building
 - New EBU file exchange platform
 - Upgrades of the media files management system in Geneva
- Live feed contribution (remote to hub)
 - Based on fibre from the most contributing stations
 - Using remote controlled dishes in other places
- Live feed distribution (hub to remote)
 - TVRO arrangement

News and Radio Exchange system

Live contribution from members' locations



Large dish
manually operated



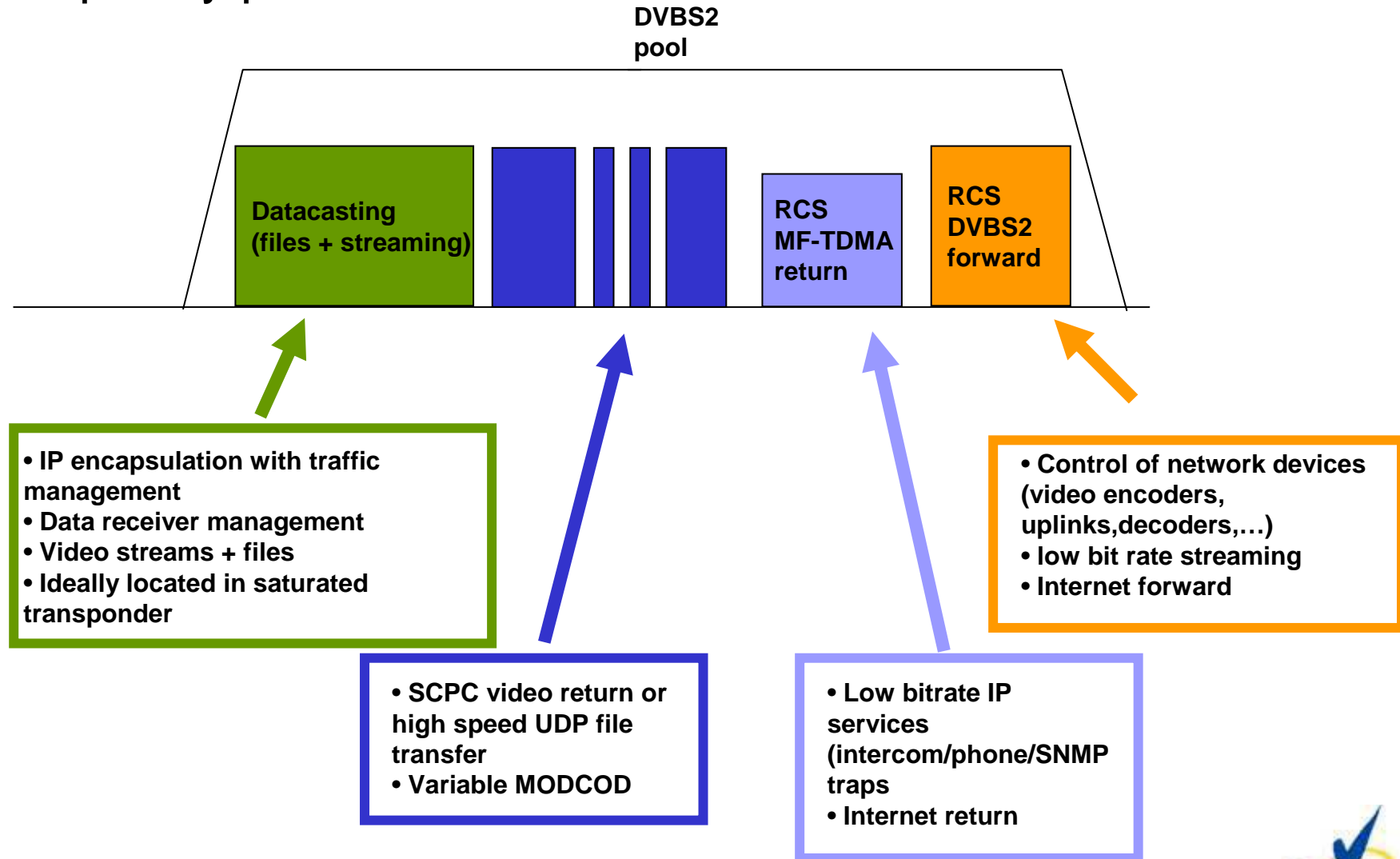
Contribution by fibre
(FiNE network)

OR



Contribution by
satellite
(Automated)

News and Radio Exchange system Frequency plan



Live News Exchange system

Main steps

- VSAT Hub building
 - Main and backup installations
- Interactive dishes deployment:
 - 1.8-2.4m with low power (4W) when fibre is used to contribution
 - Same size with higher power (60W) when live satellite return is needed

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Special Operations – Headline News



Source: AFP



Special Operations – Eurovision Show Biz Cannes, Venice and Berlin Festivals



Source: AFP



International contribution of major sporting events

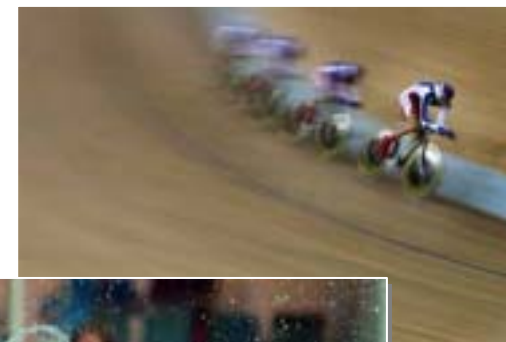
Olympics Games, FIFA World Cup™, UEFA Champions' League and UEFA European Championship™, European national football leagues, Grand Slam Tennis, NHL, NBA, Formula 1, America's Cup... and many more.



Source: AFP



Beijing 2008 Summer Olympic Games



Source: AFP



Vancouver 2010 Winter Olympic Games



Source: AFP



Distribution network

Mainly focused to big events distribution

- Main drivers for evolution:
 - Optimisation of space capacity usage (possibility to release satellite transponders and reduction of OU capacity on expensive satellites)
- Agnostic to content type (live feeds, large files)
- Additional services (improved conditional access, improved security)
- Europe equipped with interactive dishes
- Asia & America optimized with MPEG4 and high performance satellite modems

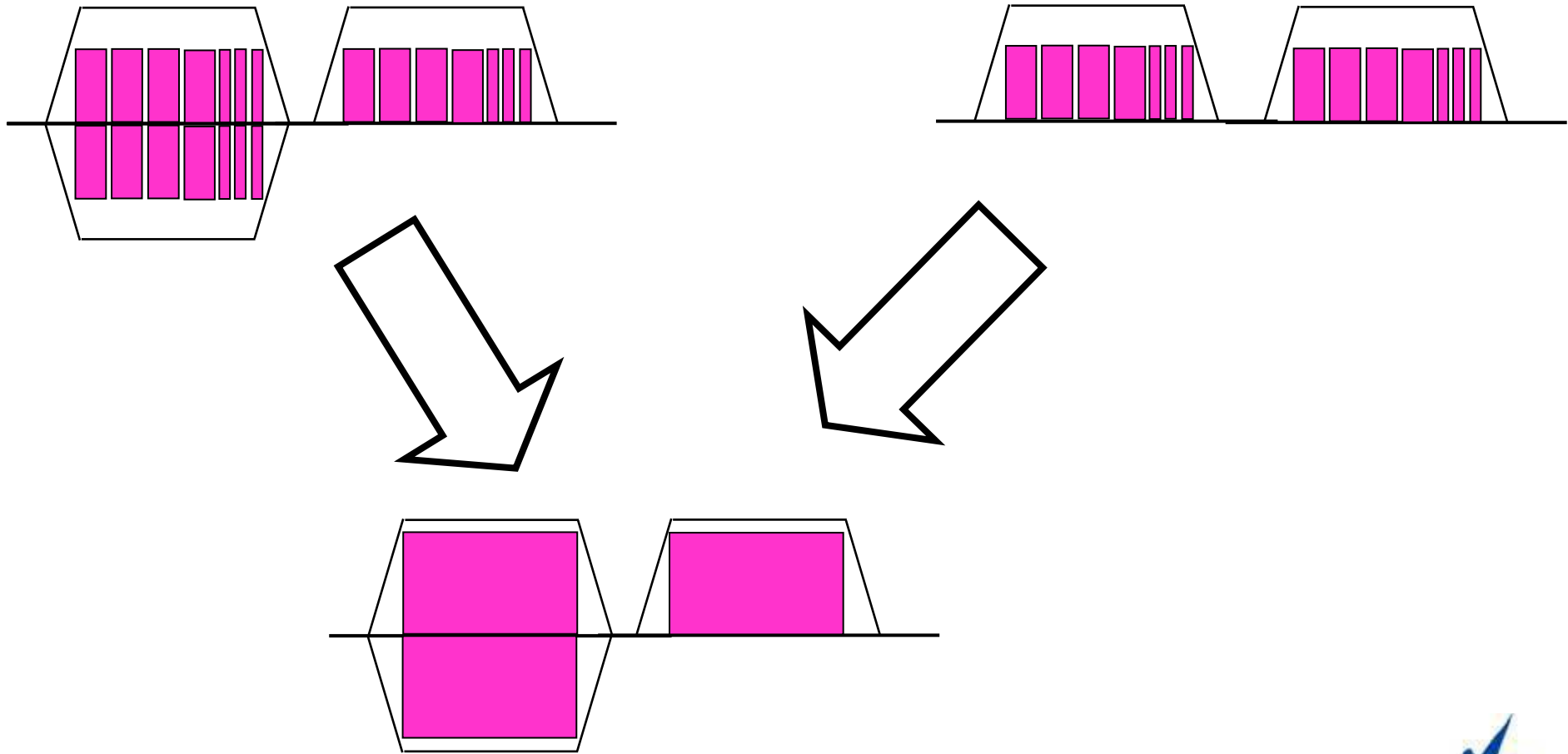
Distribution network

Summary for the development

- Replacement of the current MESH arrangement (single hop) with a STAR arrangement (contribution + distribution)
- Interactive dishes at reception are optional, but necessary to provide the control and to push the transponder throughput to the limit (ACM technology). VSAT will be shared with News network.
- High density multiplexes will be used (>4bit/hz)

Optimization of space segment Mesh->Star

Current: 5 permanent transponders (SCPC)

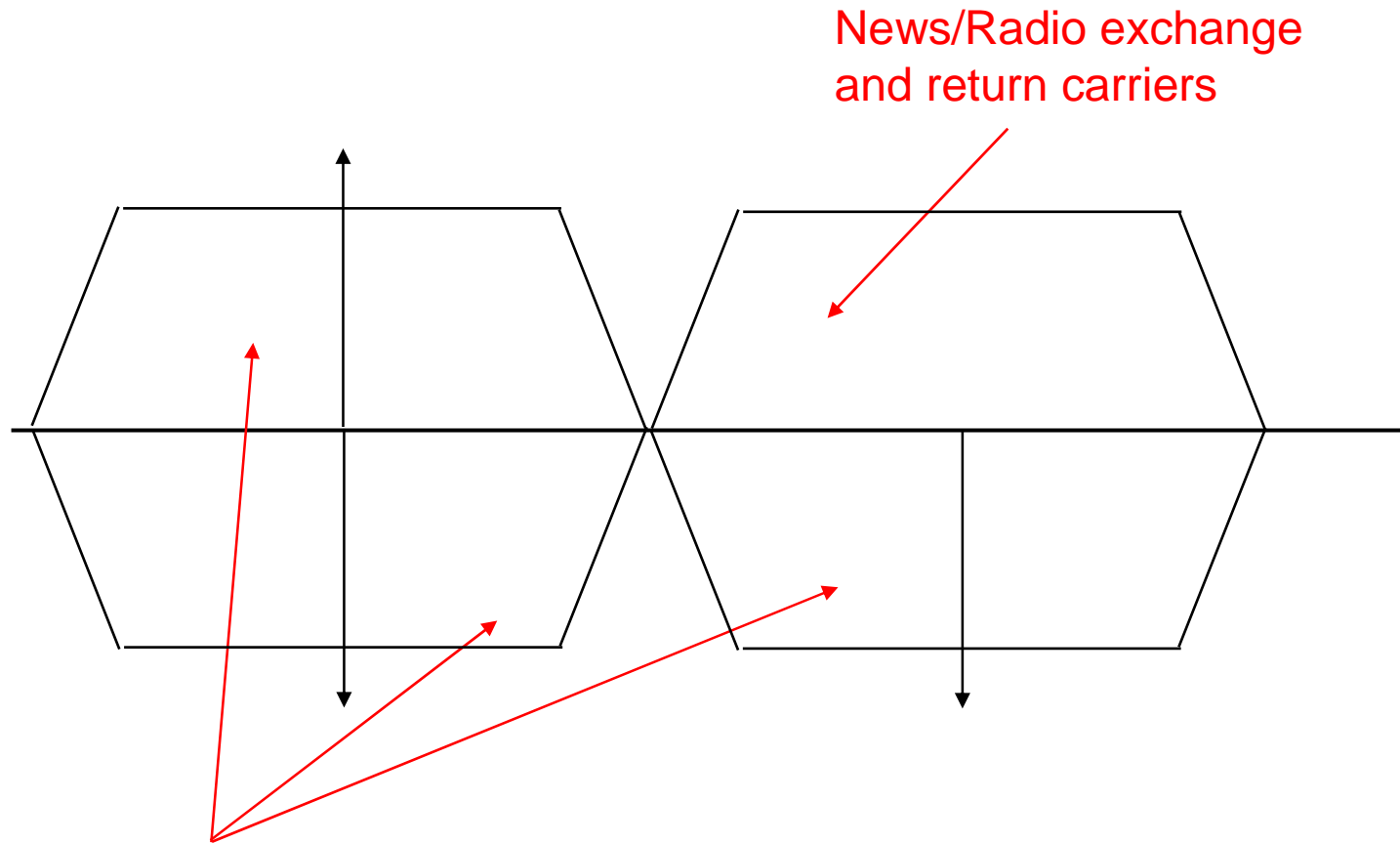


Future: 3x permanent transponders + Occasional capacity

Benefits of the STAR architecture

- **Bandwidth optimization**
- **Simplified operations**
- **File transfert possible**
- **Reduced dish size for reception**

New satellite frequency plan after evolution (permanent capacity)



News/Radio exchange
and return carriers

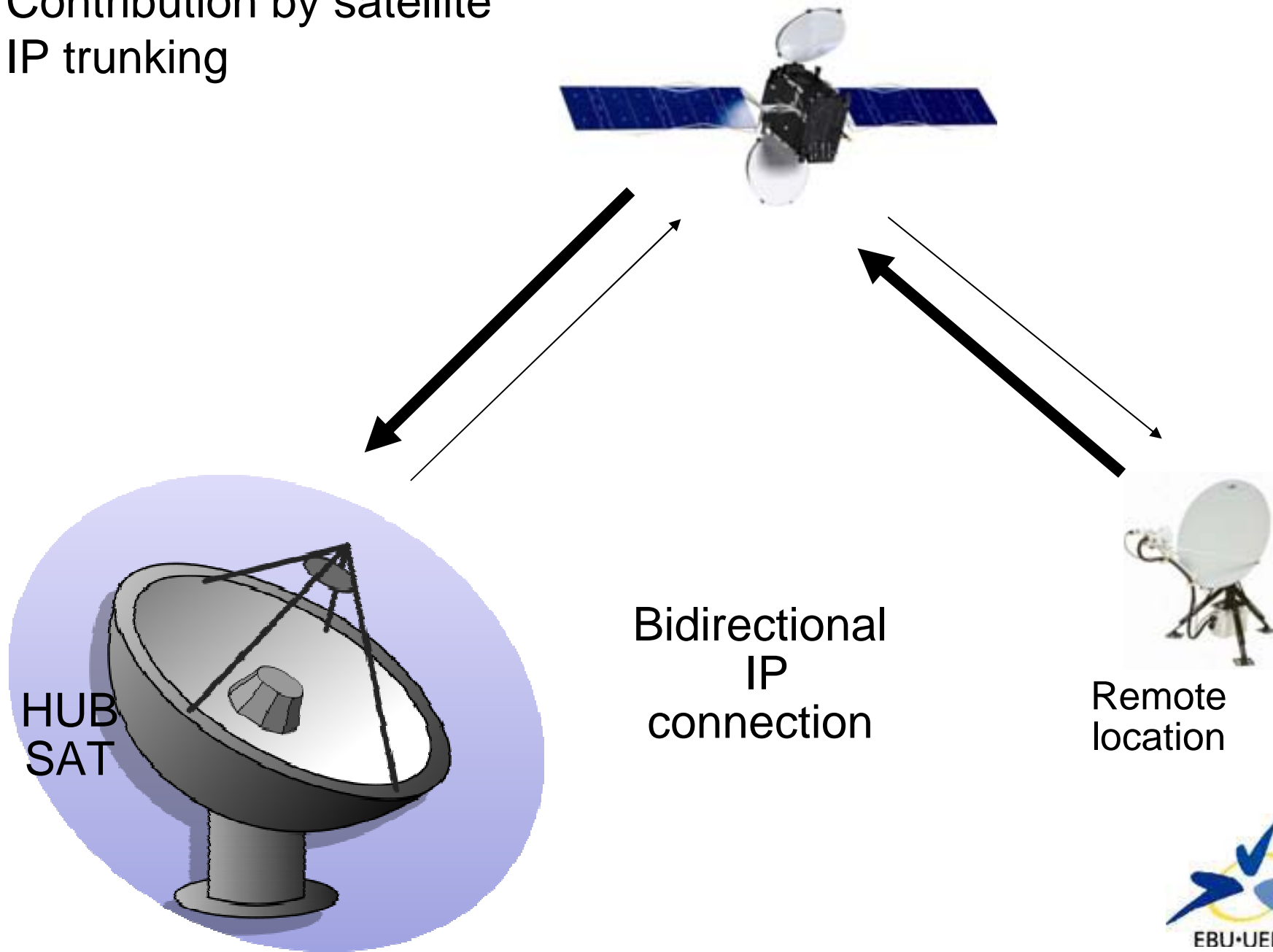
High density multiplexes for distribution
= 240Mbits per satellite transponder

Contribution by satellite

Primary contribution when fibre is not available

- Main drivers for evolution:
 - Optimisation of contribution by introducing new services (data transfer, IP connectivity, remote monitoring of the uplink)
 - Low bitrate Data connection by VSAT
 - IP trunking for Hi-speed data
- Evolution has to be coordinated with SNG providers
- Create a base of registered uplinks (Flyaway dishes or SNGs)
- Manual operations possible but use of IP modems recommended

Contribution by satellite IP trunking



Thank you for attention

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