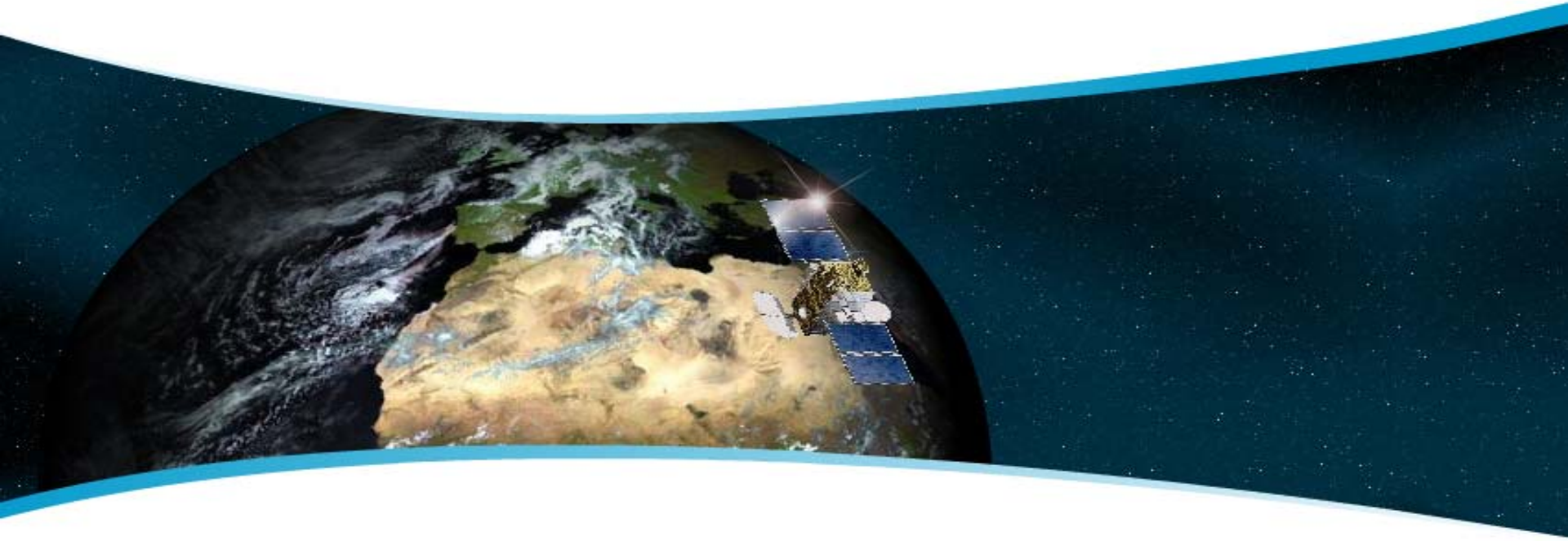

# Maximising Oil & Gas Networking Potential: Bandwidth Management & Optimisation

*-- James Taylor, Vice President Satellite Sales*

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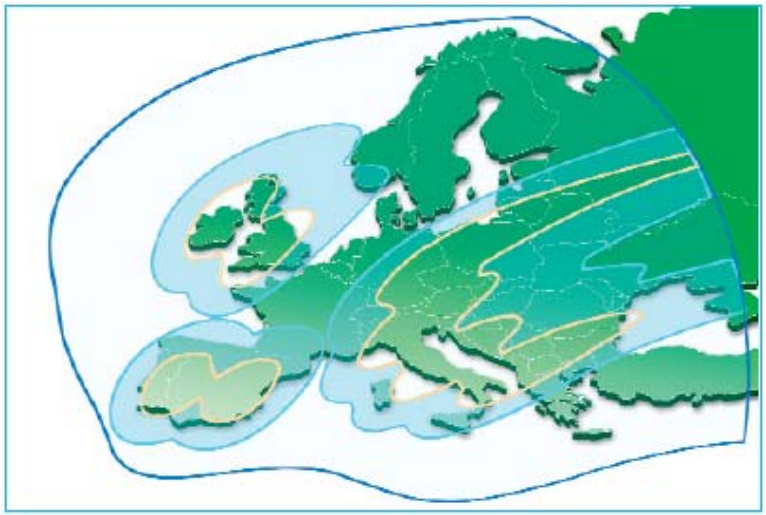
# Avanti Communications Group plc

**Avanti is an innovative UK satellite operator using latest satellite technology to meet a growing market**

- **Current platform will be serving Ca. 6,000 broadband users by end 2009**
- **Launching first European satellite, HylasOne, in 2009 – 3 more to cover EMEA & Asia by 2012**

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# What is bandwidth management?

- Is it contention ratio?
  - Where measured??
- In simplest form:
  - Getting the most from your bandwidth by analysing the traffic and prioritising accordingly
  - Applying QoS / SLA parameters
- Compression
  - Data compression
  - Higher order modulation
  - Header compression
- Cacheing (locally, in network)

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# What is bandwidth management?

- Traffic shaping
  - Using traffic shaper to set priorities for different traffic types
    - apply filters for P2P, M2M, VoIP, RTP (streaming), FTP
    - Open / close ports
    - Timed access
  - At hub level, set terminal access priorities
    - Ability to apportion bandwidth requirements, guaranteed bandwidths (max/min),
    - Set QoS for traffic, e.g. VoIP, video, data, surfing

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# What is bandwidth management?

- Protocol adaption (PEP)
  - HTTP prefetch
  - TCP acceleration
  - VPN acceleration
- Billing options
  - Volume, e.g. Per GByte
  - Timed, e.g. per minute / hour

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# Challenges

- Dynamism of network
  - predictable or unpredictable (bursty vs. Stable traffic flow)
  - Corporate network more predictable than residential / general access user
- Bandwidth requirement - scale
  - The larger the bandwidth the greater density of traffic throughput
- Network handshaking
  - Vast majority of cases can be overcome due to predictability of satellite latency
- Complexity of CPE
  - Lots of processing capacity or cheap dumb terminal

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# Conclusions

- Each network is unique and has different priorities
- Need to find the right combination for optimum performance; likely to need changing during lifetime
- Cost benefit analysis likely to require Pareto analysis to determine what levels of optimisation are worth doing

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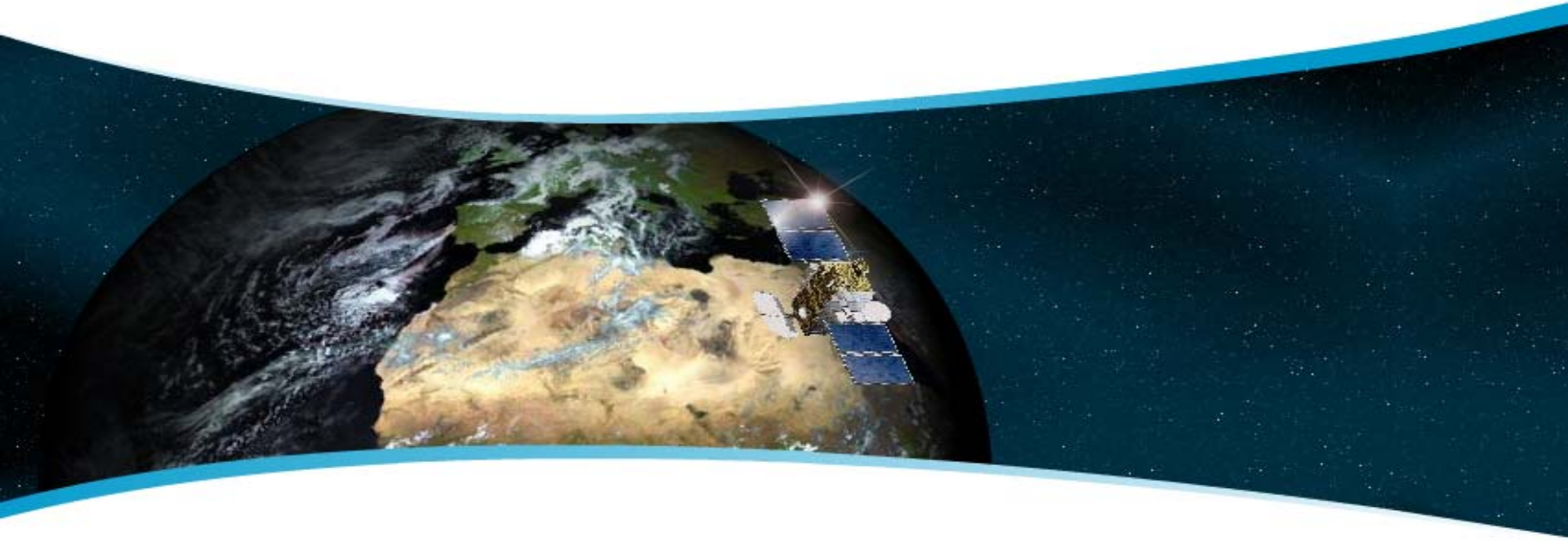
# Thank You!



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