

Profiting from High-Throughput Services

Existing and new growth opportunities, technical requirements and business and operational challenges that are emerging in the race for higher and higher bandwidth

The Four Nines Project

99.99

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World Teleport Association

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Introduction

Technology developments of the past few years, as well as new spacecraft scheduled for launch, promise explosive growth in the bandwidth available to service providers to meet their customers' needs. Ground-based technologies are pursuing 50% increases in bandwidth efficiency (bits per Hertz) through fast-evolving standards, with more on the way. The new generation of Ka-Band and multi-frequency spacecraft – ViaSat, Hylas, KA-SAT, Jupiter, Jabiru, O3B and Intelsat Epic^{NG} – are putting vastly more bandwidth at lower cost per bit in the sky than anyone ever imagined possible.

The success of this technology at growing the market and avoiding oversaturation rests in part on how commercial service providers adopt it to serve customers. There are opportunities to offer more attractive pricing and boost margin on services. More intriguing are opportunities to deliver new, more bandwidth-hungry applications and to create new lines of business that exploit satellite's unique ability for one-to-many communications. Making this work will require teleport operators to mix and match frequency bands with applications, and to exploit the strengths of new coding and higher frequencies while carefully managing their weaknesses.

In *Profiting from High-Throughput Services*, WTA builds on such past FutureTech reports as *Teleports in a Gigabit World*, which forecast the future shape of businesses exploiting higher capacity. Rather than speculating about the future, however, we are sharing here the early experiences of teleport operators using these technologies, as well as insights from the suppliers that are introducing these new capabilities. The report will identify existing and new growth opportunities, technical requirements and business and operational changes that are emerging in the race for higher and higher bandwidth.

Methodology

Through interviews with the senior executives of large and small teleport operators as well as technology and satellite executives, *Profiting from High-Throughput Services* investigates themes including:

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The Four-Nines Project

The Four Nines Project is an ongoing effort by World Teleport Association to promote best practices in teleport business, operations, technology and management. It is named for the technical standard in a satellite or terrestrial transmission of 99.99% availability.

- Applications in media & entertainment, enterprise, government, maritime and resource extraction where higher bandwidth fills meaningful customer needs.
- Ground-based high-throughput technologies: from field-proven to leading-edge, the capacity gain potential and capital expense trade-off.
- The high-throughput satellites from the service provider's perspective: from contracted capacity to partnerships.
- Sales strategies and technology management tips for adopting the new technologies.
- Examples of customer implementations using ground-based and space-based high-throughput technologies: early results, lessons learned.
- Predictions for future growth: opportunities and obstacles.

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