



# INTERNATIONAL TELECOMMUNICATION UNION TELECOMMUNICATION DEVELOPMENT BUREAU

**WORLD TELECOMMUNICATION DEVELOPMENT  
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**PLENARY MEETING**

## **WORLDSPACE CORPORATION**

### **NEW DIGITAL SATELLITE MEDIA AND DEVELOPING COUNTRIES**

An old fable tells of six blind men and an elephant. Each blind man touches a different part of the great creature. The first blind man bumps against the elephant's side and concludes the elephant is a wall. The second feels the tusk and thinks the elephant to be a spear. The third thinks the elephant is a snake after feeling the creature's trunk. The fourth blind man felt the leg and asserts the elephant is a tree. The fifth touches the ear and declares the elephant to be a fan. The last blind man grabs the tail and says the elephant must be a rope.

This old tale, which originated in India, is known to many cultures in our world. It is told to children as an early lesson that things are not necessarily as they seem. Perceptions - even those that are undeniably real - do not always yield the truth. The story of the blind men and the elephant gives children a simple paradigm to help prepare them for the infinitely complex journey of life. It also serves as an allegory useful to the global constituency working to advance telecommunication in developing countries.

Like the blind men, we too suffer a limited ability to perceive. Our disability, however, is not visual but temporal. We exist in time. Yet, for our judgements to be worthy and useful, we must "see" beyond current perceptions to realities of the future. We must do this in a world of constant, relentless change.

Regulators of a certain generation can remember when there was common agreement that telephony should be a governmental monopoly. How, they asked, could it be otherwise? The cost of establishing alternative transmission links was prohibitively high, and even if someone created them, it would be impossible to harmonize different analogue networks. It was taken as an article of faith that telephone service should be a governmental monopoly. The belief was supported by valid perceptions.

Even captains of Information Age industries have imposed current standards on future realities. Consider what the Chairman & CEO of Microsoft said about the need for random access memory in 1981:

"640k ought to be enough for anybody".

As it turned out, Mr. Gates was wrong, very wrong. The Windows operating system, now produced by his company, requires personal computers to contain random access memory several orders of magnitude greater than 640k. In the case of Mr. Gates, the impact of his mistaken judgement was trivial.

Unfortunately, the same cannot be said about the judgement that telephone service must be a monopoly. Here, adherence to old assumptions has exacted a price. By taking an overly cautious approach to liberalization and competition, many nations may be denying themselves benefits of improved telephone service and lower costs.

Though we might not possess a gift of prophecy, we can recognize the future when it arrives. For nations across the Southern Hemisphere, a future bringing new digital satellite services is imminent.

The next five years will see the emergence of several satellite-based systems for ubiquitous telephony, video, audio and data communication, including Internet access. These services will be immense - in some cases, global - in their coverage. On the terminal end, however, they will be small, familiar and even friendly. In other words, the new digital satellite systems will be vast infrastructures with human interfaces.

These systems represent an evolutionary milestone because they will bring direct satellite communications to millions of individual consumers. No longer is the commercial satellite industry exclusively focused on business-to-business services. The technology is democratizing communications. But unlike earlier advances in the satellite industry, this stage of advancement is not limited to industrialized nations.

In fact, among the new digital satellite services are systems specifically designed for remote and rural areas. The industry has come to recognize the market potential in the rapidly expanding economies of the Southern Hemisphere. Moreover, developing countries have signalled their readiness - in both commercial *and* regulatory terms - to welcome new satellite services for telecommunications and media broadcast.

One example of this readiness is the outcome of the 1992 World Administrative Radio Conference. A majority of developing-world administrations at the conference voted to allocate L-band frequencies for satellite and complementary terrestrial digital sound broadcasting. By their almost unanimous support for the L-band allocation, developing countries expressed a provident vision. Namely, they understood the necessity of bringing digital radio to the largest possible audience.

WorldSpace Corporation is working to create a new medium: digital delivery of audio and multimedia programs from geostationary satellites directly to compact, portable receivers. Over the next 15 months, the company will launch three satellites, which will bring this service to Africa, the Middle East, Asia, Latin America and the Caribbean. The coverage area encompasses 80 per cent of humanity, over 4.6 billion people.

The company's mission is simple: To create an infrastructure which will bring information affluence to regions that currently suffer from information scarcity.

The need for satellite radio in the South is illustrated by the disparity between two statistics:

- in industrialized countries there is, on average, one radio station for every 30 000 people;
- in developing countries there is, on average, one radio station for every 2 million people.

On a commercial level, the market potential is apparent. Consumers want more choices for information and entertainment, and broadcasters want to reach greater numbers of listeners.

The attributes that make this new medium attractive from a commercial standpoint - choice, quality, coverage and cost, also make it a compelling tool for development. Digital satellite radio represents an effective way to bring education, health advisories, advance weather notification and other vital information to remote populations. Because the infrastructure is in space, it obviates the need to solve power and transport problems that come with terrestrial transmitters. Because broadcasts will reach end users in the form of sound, the system is ideal for populations where literacy is a concern. And because of compact, portable receivers, the broadcasts will reach people where they are. For women, who represent 70 per cent of agricultural workers, this access will make a difference in millions of lives.

WorldSpace Corporation recognizes the promise of satellite radio is not merely an opportunity. The medium's socially responsible potentiality imposes a duty. Mindful of this, the firm created the WorldSpace Foundation, a non-profit organization dedicated to realizing the inherent promise of new technologies like direct satellite radio to improve the lives of people in developing regions.

As the International Telecommunication Union Development Sector meets in Malta for its most important quadrennial conference, satellite radio is poised to become a dynamic contributor to the global media industry. It is also positioned to emerge as a potent tool for development. Whatever this new medium becomes, this much can truly be said: The fate of satellite radio will be determined by many players and many forces. While WorldSpace Corporation must necessarily play a leading role, broadcasters, programmers and advertisers will have a strong impact. So will manufacturers and retailers. Regulators will have a substantial influence upon this new medium. Of course, the ultimate judgement on satellite radio will come from the consuming public.

WorldSpace is not alone in this work, nor is it working in isolation. Other companies that aspire to create systems for global wireless Internet access and ubiquitous telephone service face similar technical and market challenges. And in the regulatory arena, the companies creating new digital satellite services face a common paradox. Digital technology makes their systems possible; at the same time, it makes their services difficult to define and categorize.

A binary digit does not begin its existence as a data transmission; a broadcast or as a value added service. A bit simply is. When bits - easily produced, organized and sent - flow irresistibly in a common direction, we call it convergence. All too often, the changeable nature of digital technology leaves us in a position akin to the blind men who touched the elephant. A system transforms itself before us. We know our perceptions are real, but we wonder if our understanding is true. Most of all, we want our judgements - the product of perceptions and understanding - to be correct.

Indeed, we *need* these judgements to be correct because our decisions have an impact on so many people. Satellite entrepreneurs make choices that have real consequences for shareholders and investors. The decisions of telecommunications regulators affect the economies and lives of national populations, continents and even the entire world.

How do we form the right judgements in a world of urgency and unrelenting change where perceptions do not always illuminate the truth? As entrepreneurs and regulators, we maximize the likelihood of favorable outcomes when we are open to different interpretations and flexible in forming our strategies. We honour our constituencies when we are pragmatic; viewing technical standards as tools, making sure we remain conscious masters of standards and never become their unthinking protectors.

Most of all, to realize the complete potential of the new digital satellite services we must communicate for the sake of communications. We must share our perceptions and our

understanding, and we must openly exchange our views. Anything less would be a disservice to ourselves and the millions of people who rely on us.

The six blind men were silent and isolated when they encountered the elephant. If only they had spoken with each other *while* they were touching the great creature, they might have converged on the truth that is the elephant.

As we perceive the wondrous new terrain of satellite services, communication amongst ourselves will help us gain a clear truth of our future.

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