

The Digital Dividend

– a new opportunity for broadband everywhere



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Freeing up analog TV frequencies by switching to digital TV services is right now happening globally. This ‘Digital Dividend’ presents a historic opportunity to reduce the digital divide – and to create profitable new business models – both in developed and developing countries.

Societal and economic development, cohesion and participation will be promoted by access to voice, messaging and low-rate data services. But for a modern, sustainable society to prosper fully, broadband communications must be available to the entire population in all areas. While the technology is available to achieve this, its viability has been held back to date by spectrum allocation decisions taken half a century ago.

The digitization of terrestrial broadcast TV offers a historic opportunity – already seized in some countries – to put the radio spectrum freed up by higher-efficiency digital transmission to new beneficial and profitable uses.

The size of this new resource is significant: it amounts to more than 300MHz of additional spectrum in Europe. This is equivalent to the total spectrum licensed to all 2G and 3G mobile service operators today.

This is why it is so important that administrations and regulators support the public interest by ensuring this spectrum is put to the best social and economic use, and not simply used for ‘more of the same’.

In simple terms, we have a choice between providing a new spectrum resource for viable broadband coverage for the majority of people, or making more TV channels available on terrestrial networks – channels that may already be available from alternative distribution channels like cable and satellite.

Doing more, for less

The spectrum targeted for new communications services – at around 700MHz – has superior propagation characteristics and can provide wider wireless broadband coverage in a commercially viable way. The oft-stated political goal of delivering ‘broadband for all’ comes at a much lower cost: broadband

wireless coverage of a given area using a given amount of spectrum in the 700MHz range can be rolled out for only about one-third the cost of providing the same coverage in the 2,000MHz range.

In the longer term, the majority of the digital dividend should be considered for use by interactive, personalized services. If there is still an obligation to offer public service terrestrial broadcast TV, this can be achieved in part of the spectrum while still leaving most of it available for new uses.

New radio technologies becoming available over the next few years will be able to use the remaining spectrum capacity for advanced interactive services, including high-speed Internet access and broadcasting content. The smaller cell sizes of communications systems offer total network capacities that are orders of magnitude higher than those available from high-power broadcast cells. They enable a wide variety of targeted content to be delivered to different cultural, ethnic and language groups.

More interactive, more personalized

The growing popularity of user-generated content and higher expectations of interactivity and personalization are driving the need for bidirectional broadband capabilities. In contrast to the traditional, one-way TV broadcast model, people are increasingly used to deciding for themselves what content to consume and when to consume it.

To succeed, media and content providers will need delivery channels that offer interactivity and a wide selection of on-demand content delivered over many parallel channels. And with a large proportion of the financing for commercial media coming from advertising, these delivery channels need to be able to offer greater knowledge of consumer preferences and usage.

Over time, traditional one-way mass-market broadcasting is likely to become less attractive as a delivery channel. High-capacity broadband systems that have all the characteristics needed to meet the needs and preferences of all consumers, wherever they are, will be the winners.