

# SPECIFICATION FOR A CONSULTANCY STUDY OF THE IMPLICATIONS FOR SPECTRUM MANAGEMENT OF CONVERGING TECHNOLOGIES

## **Appendix I: Study Terms of Reference**

***The purpose of the study is to help the Radiocommunications Agency manage the radio spectrum strategically to meet the changing needs of the knowledge driven economy as services converge; and to contribute to the development of policies on communications and e-commerce generally.***

### **BACKGROUND**

#### **The Radiocommunications Agency**

The Radiocommunications Agency (RA) manages most non-military radio spectrum in the UK and represents the UK in international discussions of radio matters. Its mission is to facilitate access to radio spectrum of the appropriate quality, for the widest range of services, and so promote the creation of wealth, competition and choice. The RA aims to be a catalyst for growth, competitiveness and consumer benefits through facilitating the innovative and widespread use of radio and the continued development of a wide range of radio services.

#### **Convergence**

Markets and technology are changing at an unprecedented rate. One of the key developments is that broadcasting, telecommunications and computing are converging as the use of digital technology becomes more widespread. Differences between services are being eroded, at least from the consumer's point of view. In a digital network, broadcasting, voice transmission, data transmission, music, video or any other type of communication are handled as a stream of digits and can all be transmitted and manipulated by similar technology. Content can increasingly be divorced from delivery. However it is defined, convergence can be expected to have profound implications for society in general, for demand for radio spectrum and for the regulation of the converging sectors generally.

#### **Implications of convergence for the Agency**

The Agency's objective is to manage the radio spectrum optimally in accordance with a strategic plan that promotes enterprise, innovation and competitiveness and makes full and appropriate use of all available spectrum management tools. In so doing, it aims to promote wider Government policies of building the knowledge driven economy, keeping the UK at the forefront of the digital information revolution, improving the UK's international competitiveness and making the UK by 2002 the best environment in the world for electronic trading.

## **THE STUDY**

The aim of the study is to produce scenarios that may be used to develop policy on communications generally; and to assist the Agency's strategic planning by assessing how convergence could impact on demand for radio spectrum and how the Agency might best respond to meet the changing demand. All relevant services and spectrum should be considered.

There is considerable uncertainty about the speed and direction of developments and the situation is complex. Technology is some way ahead of changes in consumer demand and it is far from clear how the market for converged services will develop or how fast. In view of the complexity and uncertainty, the study might lend itself to an approach that involves constructing a series of scenarios for the future and devising an appropriate strategy or mix of strategies to deal with the range of possible outcomes. The period to be covered is likely to be about 10 years. It is an integral part of the study not just to construct scenarios but to explore and assess the strategic implications for the Agency and to provide a strategy or portfolio of strategies for the Agency to follow in each scenario.

This is likely to involve the provision of a description of the interactions and linkages between alternative policies and the Agency's spectrum management objectives, together with an indication of the timescales for policy implementation. It will also be important to provide a feedback mechanism so that the Agency can adjust its strategy in response to trends and events as they unfold.

The implications of convergence for spectrum management and the Agency's future strategy should be explored, with particular emphasis on the key drivers, influences and sensitivities, including:

- The level and pattern of demand for spectrum in various parts of the spectrum and for various services or technologies;
- The optimum strategy for making balanced, complementary use of regulation and market-based tools to achieve the Agency's strategic objectives;
- International constraints and service definitions;
- Electromagnetic compatibility and interference.

The report should include recommendations on the actions necessary to meet the Agency's objectives; key events that should be monitored and used as triggers for changes of strategy; and the timescales on which the Agency should act.