

Abstract

The concept of interactivity continuously enhances our day-to-day living, allowing us to experience a more convenient and enjoyable life style. Existing analogue technologies such as the internet, mobile phone and satellite have now entered their digital phase, making it possible to increase their capacity for interactivity. The technologies which provide this increased interactivity, namely the internet, mobile and television, are classed as interactive technologies. Television has been successful at marketing, having launched an interactivity interface known as iTV which initially offered superior commercial prospects. However, after a decade, the iTV industry is still quite young and has not reached its full potential. This thesis adopts a range of research methodology with which to forecast the future of interactive technologies, especially interactive TV (iTV).

The uptake of new interactive technologies depends on many factors, notably the existing infrastructure in the country of adoption, cultural attitudes to new technology, the radicalism of the technology, social influences and interactions and ease of use, quality and cost. Beyond these, many other significant factors influence the acceptance of interactive technologies, the focus of this thesis is to ascertain the importance of those factors mentioned on technology adoption.

This study has adopted technological and judgemental forecasting techniques to predict the future of interactive technologies, following which Cross- Cultural and Technology Acceptance studies were carried out to investigate interactive technology adoption. In the Cross-Cultural study, survey data were collected from the UK, Hong Kong and Pakistan so as to examine cultural factors pertaining to the likelihood of adoption, while Growth Curves were used to model and forecast future levels of adoption.

Then technology trends in different countries were collected from the global marketing database Euromonitor. The Growth Curves, applied to a selection of interactive technologies, were evaluated and compared to identify the

most useful model with which to forecast the future of interactive technologies. The findings identified the Bass Model, Simple Logistic Model and Gompertz Model as the most suitable models for the purpose, with different models identified as best for different cultures.

The Judgemental study established that WWW will be the dominant service provider for financial services such as banking or financial products, while iTV will be the dominant service provider for entertainment. WWW will in fact be the dominant provider for most of the services, followed by iTV and then WAP. It is most likely that WWW, WAP and iTV will exhibit technology convergence in 20 years' time and in all probability will converge into WWW.

Further to this the Cross-Cultural study confirmed that there are significant differences between cultures regarding the acceptance of interactive technologies, as it is affected by demographic and social interactions and influences. In addition, the study showed that each interactive technology has its own significant elements which influence its acceptance. Overall, the key elements identified as influencing acceptance of interactive technologies were Knowledge and Confidence, followed by the number of hours the individual spends with his or her family.

The Technology Acceptance study identified a technology acceptance model for each interactive technology: WWW, WAP and iTV, which established the factors expected to influence the future growth of the technology. Managing these significant elements will assist further in promoting the growth of interactive technologies.