

Chapter IX

Broadband for the Mass Market

Roger Saunders

Saunders Associates, Australia

ABSTRACT

This chapter suggests there is no new application to stimulate adoption of broadband by the mass market. Many new applications have been introduced but have not created the desired growth. One application that could have mass market attraction is Voice over Internet Protocol (VoIP), and it is the most likely killer application. But failure by major communications carriers to develop VoIP is slowing broadband penetration to this larger market segment. This resistance results from the risk to current carrier call revenue from VoIP, and that infrastructure to support high-speed broadband may not generate adequate revenue in the short term to satisfy shareholders or financial markets. No international standards have yet been set, and VoIP between the Internet platforms is not fully integrated. Also the multitude of broadband packages offered by the various competing carriers creates confusion in the mass market which, as a result, defers purchase decisions.

INTRODUCTION

While Internet and broadband access has been promoted as a fast universal data transfer and information providing media, the mass of information available and the relative complexity of accessing the right information for the neophyte Internet user is a deterrent to adoption.

It is suggested that despite the many arguments that access to broadband alone or various segment-specific applications are the key to broadband adoption, there is no new magic bullet or killer application to stimulate rapid adoption of broad-

band. The only immediate and easily recognizable application of broadband for the mass market is voice communication, that is, voice over Internet protocol (VoIP).

This places incumbent telecommunication providers in an invidious position where their primary revenue source is from voice traffic.

To accelerate penetration of broadband and reach a level of return from the required capital expenditure, these organizations would be sacrificing their traditional revenue base for a lower revenue stream and opening up their customer base to competition. Therefore they are reluctant

to adopt applications that are likely to have a negative effect on their traditional markets and their prime revenue sources. While the reluctance by these companies to accept the fact that new technology has rendered much of their existing infrastructure and key products obsolescent, build appropriate technical capability, agree to cooperate in the development of international standards, and promote applications such as VoIP, the diffusion of broadband to the wider population is likely to be slower than would otherwise be the case.

BACKGROUND

Currently broadband is being offered as a universal means of providing data, information, education, entertainment, and a myriad of other applications, each of which appeals to particular and different segments of the market. However, for the broadband provider, maximization of penetration to the total population is needed in order to recover costs and meet the expectations of their shareholders. It is also evident that many governments around the world are pressuring incumbent communications carriers to provide broadband to cover the majority of the population, even when this means expending large amounts of capital in locations where a return on that investment is unlikely.

This seems to be based on a belief that access is the primary stimulant necessary to encourage adoption of broadband and satisfy the general population.

However, the assumption that having access to broadband is sufficient to stimulate adoption by the mass market as suggested by Middleton (2003) appears to be fallacious when comparing actual demand relative to broadband availability.

A counter to the argument that access alone is the killer application is that expressed by Smith and Leung (2002), who believe that high-speed Internet access is insufficient to drive broadband connectivity and that there is still a need to overcome a number of technological, economic, and social issues before any key killer application or applications necessary to promote demand can be realized.

The providers who invest capital in broadband infrastructure need these key "killer" applications if they are to attract a broad mix of customers and at the same time encourage sufficient use of the service to justify the investment needed.

To date, growth in broadband use has been at a steady rate. However, stock market investors and analysts have been conditioned by what they see as the rapid market penetration of mobile communication to expect rapid adoption of this new technology. But broadband is not the same as the mobile service.

Broadband is essentially a simplex means of communication where information is either downloaded from the Net or uploaded from the customers. While it does have text capability, it is not a direct two-way communication medium. There is some duplex voice carriage capability with VoIP, but it is not the same as mobile voice and it currently does not have the same functionality or quality as the existing wired telephone service or the mobility element of mobile network, so direct comparison of growth expectations is somewhat spurious.

The apparent high rate of market penetration by mobile communications is somewhat illusory since mobile communication was available in the 1960s—albeit limited in availability and quality with high access and usage prices—and it should not be used as a benchmark for new technology take-up. Take off in mobile communications in the mass market did not occur until cellular technology was introduced with significantly greater availability, performance, and at acceptably lower call prices. It is likely that broadband will follow the same path and require more technology to stimulate adoption by the general public.

Technology was the “killer” factor for mobile communications, and a key question for broadband providers is to find the factor that will stimulate adoption of broadband by the market so that expenditure on the needed technology can be justified. However, with broadband, many of the major incumbent communications carriers, having not yet identified or accepted the existence of a killer application, are reluctant to invest the high level of capital necessary to support the required technol-

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