

1.4 WHAT FACTORS ARE DRIVING THE DEPLOYMENT OF THESE NETWORKS?

As already stated, the underlying imperatives of the various digital technologies themselves, are underpinning the emergence of local open access networks. Digital IP networks do not require an 'operator' in the same sense that former analogue telecoms networks did – where management of the routing of traffic was undertaken through control of the physical network infrastructure itself. This has led to an explosion of innovation at the periphery in the development of new applications and services by parties other than the network operator – all of which are seeking access to their own potential markets of 'willing buyers' over an open and 'non-interfering' infrastructure. While this is readily available in the trunk and international context, (especially for large corporate customers) this has not been true for the mass market of residential and SME users around the world.

Against this background of technological imperative, there are a number of factors driving the deployment of these networks. There is no single 'cause' but a coalition, in varying degrees of various factors, which are proving sufficient to stimulate this development. They include the following. Firstly, in a mature and developed market, there is an undoubted increase in what might be called 'end user frustration' which is resulting from the apparent increasing gap between the "consumer experience" that the underlying technologies have the capability to deliver (and which many are experiencing for themselves in their office/work environment) and what is generally on offer from conventional telco/ISP service providers. As at the time of publication, this phenomena of 'consumer frustration' has been partly satiated by the development of 'always-on' DSL technologies but frustration remains with the seeming inadequacy of 'bandwidth' and 'openness' in the local public networks. It can be argued that although this is largely confined to the sub-culture of what might be called 'geeks and nurds' there is nevertheless a growing amount of circumstantial evidence to suggest that this frustration is now seeping out into a wider consumer market. This will be exacerbated as the explosive growth in recent years (aided by tumbling prices) of high quality, low cost, digital consumer devices such as camcorders which further stimulates their owners to want to 'share' or broadcast their creative output over the internet with others in their local or global community.

Another factor that is stimulating consideration and deployment of these networks is an 'informed and specific extension' of this market frustration argument as being articulated by local municipalities and the public sector. This is well argued by Cisco [\[ii\]](#) "Cities have always competed with each other, but in a global economy that competition has intensified. ... Many local governments are realizing that providing this infrastructure can put their city on the map as a forward-looking, innovation-driven area."

What is significant is that although national public policy and indeed, pan-national policy in this area is very concerned with "eliminating the digital divide", at the local level there is another battle raging. It is a battle of "creating a digital divide" – as a means of competition and differentiation between one community or city and the next. An important public policy issue is whether such technology driven local community "digital-divide creation" is to be welcomed and fostered in this early stage of these local open access networks or whether, as will undoubtedly be argued by the vested interests that it will threaten, that it should be extinguished or halted while nation or state wide uniform policies are set in place.

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REFERENCES

[ii] "2010 The Broadband City Roadmap for Local Government Executives" published by Cisco Systems