

ACS

Telecommunications Consultants

The Future of the Universal Service Obligation

A Discussion Paper

Universal Service Obligation - Where Next?

Executive Summary

The Universal Service Obligation (USO) is applied to utility companies that provide network facilities for a variety of products. The USO particularly in Europe, has traditionally been supplied by former state owned monopolies and that requirement was extended by default during the deregulation and privatization that was popularized during the latter decades of the 20th century. These obligations were not necessarily a problem for the network operators provided that their network technologies and delivery mechanisms remained the same. However, for telecommunications operators the USO is now disconnected from the traditional network. This paper examines the issues that must be addressed.

Origins of the USO

In Europe, and many other countries, with few exceptions outside North America, utility companies were generally state owned monopolies. Under state ownership and operation service, in the sense of a government agency providing the citizens with a social function, was paramount above efficiency and innovation. Thus the costs of a service were spread over the population as a whole regardless of whether or not the network provider supplied any particular individual. This had the effect of a lowest common price for the connection and use of services, which was not necessarily the cheapest or most cost efficient.

In addition to the provision of services to citizens, government owned monopolies were often treated as an extension of the state, thus further requirements for the provision of services included a reduced cost option for socially deprived groups. This often included (further) subsidized installation costs and lower rates for calls. While certain limitations may be placed on this particular group, such as call limits and exclusion of higher rate call subsidies, the costs of this social service subset of the USO were met from the network operator's own resources.

Extending from the above there is also a general requirement for the USO designated operator to provide public telephones in convenient places. This requirement ensures that users are able to access emergency services and other essential functions (such as directory enquiries, operator assistance etc) without the need to have their own line or when access to a telephone is otherwise required, such as at railway stations or other transport hubs.

A further, almost incidental, feature of the USO is the ability to make telephone calls, particularly emergency calls, even during mains power outages. The design of modern switched circuit telephone exchanges included line power to operate the subscriber equipment, or at least a simple telephone. This feature enabled continued service even if the subscribers' were subject to power failure. Further, this feature (perhaps better termed Universal Access Obligation 'UAO') was incorporated into the requirements for both fixed and mobile network operators, ensuring emergency access even under service suspension or, in the case of mobile networks, without a valid or active SIM in the handset.

Expansion of the USO

In the 1990s the USO was further extended by NRAs to include functionality for dialup internet access and also to include FAX. This was essentially a continuation of the analogue world and based in circuit switched technology. It is worth noting, however, that while the functionality was unaffected by mains outage, subscriber terminal equipment was reliant on continuous power to operate and thus while the USO was compliant the subscriber was in most cases unable to make use of it.

Meanwhile at the end of the 20th and beginning of the 21st centuries GSM mobile networks made huge gains in customers and with the USO applied to these operators by NRAs, emergency access for the vast majority of telephone users was now assured.

At the same time changes in technology and user preferences also saw the rise of the DECT phone which itself relied on continuous mains power to function. Thus now many fixed line customers no longer have the assurance of a working telephone line at all times since many will now no longer have a traditional line powered device on which to make calls. This further drives the use of mobile as a communication means and we are now also seeing an increase in 'mobile only' homes¹.

USO For Fixed Line Incumbents Only?

Currently throughout Europe the USO obligation remains, as it always has done, with the former monopoly operator which in most cases was originally state run and in some cases the state remains substantially a substantial shareholder in the privatized company. The USO currently amounts to a requirement to provide a fixed termination at any location within the operators territory, disregarding cost, although some NRAs permit charges² to be levied for distances beyond certain distances from the exchange or main switching point.

This requirement is based on a pre-existing copper based network which has been developed over many years. Many incumbents 'inherited' this asset from the State as a consequence of its monopoly position in providing telecommunications. This position gave incumbents a distinct advantage in network provision and consequently NRAs applied certain wholesale obligations on incumbents. While many battles have been waged over pricing and margins between incumbents, new entrants and the NRAs, sometimes through the courts, this existing asset and the network advantages that it provided have ensured the development of various forms of service and infrastructure competition both for telephony and broadband.

The entry of third parties into the line provision sector has in some ways diluted both the USO and UAR, since it now permits new entrants to provide broadband only services, thus divorcing the subscriber from the security of service under public mains

¹ Ofcom - The Communications Market 2011 (August)

² Ofcom - Review of USO available at: <http://stakeholders.ofcom.org.uk/consultations/uso/main/> accessed 1/11/2011

outage conditions. However, some NRAs have required broadband only providers to ensure access to emergency numbers³.

While the USO is imposed on dominant fixed line operators, only the UAR is imposed on other public access telephone providers ('PATS'). Among these are non-dominant fixed line operators, such as cable companies and ISPs utilizing wholesale provisions. This means that consumers do not have the same guarantees of USO if they choose, as an increasing number do, to base choices on factors other than the belt and braces reliability offered by the USO provider. Nevertheless, there are provisions for the UAR which is as good as it gets if the consumer is a mobile only user.

USO and Next Generation Networks

Many incumbent operators are now considering the introduction of more fibre into their networks, creating Fibre to the Cabinet ('FTTC') and/or Fibre to the Home (FTTH) networks that intent to replace all or most of the existing copper network.

This change has a significant impact on the provision of services. In order to comply with existing USO requirements the operator must include POTS emulation, yet the consumer may not necessarily benefit from this provision since if his base service is broadband only or the CPE is DECT based, then the additional cost of the emulation is wasted and only serves to increase the base cost of the service. Similarly, other PATS that make take wholesale offers or perhaps making use of infrastructure sharing may not be required to provide POTS emulation as the USO is not applied to their network. This potentially distorts the market and portends complaints from incumbent operators.

So what is the solution? It has been proposed that the USO should be state funded, this idea has certain merits since it underpins the provision of social support for disadvantaged groups within society. However, it would seem that governments have little appetite for expanding state spending, especially in the straitened times, and is more than content to let the former state monopoly carry the burden.

Should the NRA, then, redefine the USO and make it more of a USR in line with the functions of the NGN?

There is a good case for NRAs to step in to this debate. After all, after many years of regulatory intervention most jurisdictions now have acceptable levels of competition between networks. Consumers too are now becoming less reliant on traditional fixed line communications and this is witnessed by the inexorable rise in VOIP and mobile traffic. The way in which consumers use communication technology is also changing and the up-coming generation is now more sophisticated in its use.

For the protection of basic services at low cost, the market has provided the solution. Pay-as-you-go mobile services now offer not only low cost voice services but will also provide low cost broadband at relatively high rates, at least, under good conditions, at the 2Mb/s speed that governments seem to have set as the minimum.

³ Ofcom - Regulation of VOIP Services available at:
<http://stakeholders.ofcom.org.uk/binaries/consultations/voip/statement/voipstatement.pdf>
accessed 1/11/2011

Given the ubiquity of mobile in most countries, even those with low densities of fixed penetration as seen in the third world, there now seems little benefit in providing a USO fixed line. This is more so the case where the consumer will in all probability connect using a DECT phone or simply be a broadband only user.

Conclusion

NRA's should now consult on the revision of the USO with a view to shifting the burden to all PATS networks by redefining services as UAR. This would involve little or cost to existing operators since the services required are already developed and in the market. Whether the state would be willing to underwrite socially deprived sections of society which would then remove the burden from the telecommunications operators is open to question, but NRA's could set the course.

Ultimately, it is important that all citizens are given equal access to essential services. While it is true that in other social network provisions, such as gas and water, the cost of provision continues to rise, this is not the case (in real terms, at least) in the world of telecommunications. The state can set the parameters and the operators can provide the services.

By removing the notional costs of USO from operators, an easier route can be ploughed in determining base prices for services which will ultimately benefit all.