

How AWTG sees the interworking of networks in the Future

Next Generation network concepts is all about how to deliver ubiquitous services through multiple access technologies in order to reduce the cost of per megabytes of data delivery. The goal here is to support new services that no access technology could individually handle in an efficient and low cost manner. Existing multiple access technologies are cellular, WLAN, broadcast and WiMax. Many cellular operators have already interworked their cellular networks with WLANs (WiFi networks) in order to leverage the benefits of licence-exempt spectrum usage and higher capacity and QoS enhancement. Their subscribers also benefits from access to a range of broadband multimedia services such as video streaming, file downloading and access to the Internet. So far, operators taking this path have adopted the lower degrees of coupling between their cellular networks and WLANs only providing a single bill to their subscribers. However, for full roaming between these two access technologies, tighter degrees of coupling are needed in order to support a single sign-on (one authentication key) and to support handover.

Recently, cellular and broadcast operators have been investigating the potential for interworking their respective networks. The benefits of this interworking are well recognised. From the broadcast operator's point view, interworking can introduce interactivity to their unidirectional point-to-multipoint broadcasting systems; that is to say, a broadband downlink based on DAB/DVB-T can be supplemented by a narrowband uplink through current 2G/3G cellular systems. Thus, broadcasters can adapt the content of their multi-media services more rapidly in response to feedback from their customers. From the cellular operator's point view, interworking can provide a complementary broadband downlink in indoor and vehicular environments in order to support the Internet multimedia traffic which is inherently asymmetrical.

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