

**Presentation by M H Au, Director-General of Telecommunications
at the “Fixed-Mobile Convergence Forum”
on 22 September 2005**

Ladies and Gentlemen, good afternoon.

What is “fixed-mobile convergence”

It is a market and technological development leading to blurring boundary between fixed and mobile services.

What leads to fixed-mobile convergence?

As you know, a telecommunications network is made up of a core network and access networks. The core network is for transport of messages, while the access networks connect users to the core network. It is the access network that determines whether the network is a fixed network or a mobile network. An access network of copper pairs and optical fibres connects users at fixed locations, and the access network and core network together form a fixed network. An access network based on the 2G or 3G cellular technologies connects users in motion, and the access network and core network together form a mobile network.

With the advent of the Broadband Wireless Access (BWA) and other technologies, the access network can connect fixed customers or moving customers. It would be difficult to classify whether the core network connected to such an access network constitutes a fixed or a mobile network.

In the Next Generation Network architecture, the core network can be connected to more than one type of access networks (optical fibres, DSL-enabled copper pairs, 3G networks, wireless local area networks, and so on). Some access networks may be connecting fixed customers. Some access networks may be connecting moving customers. Again it would be difficult to classify whether the network is a fixed or a mobile network.

The opportunities of fixed-mobile convergence

Once the restriction that a particular service can only serve fixed or moving

customers is removed, there can be plenty of scope for designing the service around the actual communications needs of the users, who can be expected to be stationary at some times and moving at other times. The result is that new and innovative services will emerge, bringing convenience to users and generating value to operators.

Another important aspect is that not just one class of operators, fixed or mobile, can provide such converged services. Both the existing fixed and mobile operators will be able to participate in the provision of services that satisfy all the communications needs of their customers.

The challenges of fixed-mobile convergence

Some existing operators expressed worries that fixed-mobile convergence would bring more competition to what they consider to be an “over competitive” market. For example, when the BWA technology is licensed, fixed network operators are worried that new operators will enter the market and compete with them in providing broadband Internet access and voice over IP services to residential customers. Mobile network operators are worried that new BWA operators will divert revenue from their 3G services.

These concerns may be exaggerated. In the initial years, the BWA technology may just be complementing the existing technologies, rather than competing head-to-head with them. It may generate new sources of revenue not exploited by the existing technologies.

That the threat to existing technologies may be exaggerated is supported by the relatively low level of revenue generated in the Singapore auction of the BWA spectrum. In countries like South Korea, where 3G and broadband usage rates are on top of the world, they have decided to roll out BWA systems without fearing that the viability of existing technologies would be undermined.

I have also heard comments that investors are very cautious about the BWA technology and some have said that they have not yet identified a business case for investment in BWA. This seems to be inconsistent with the view that the entry of BWA would drain the existing operators of their customers and revenue.

Although there have been a lot of expectation, so far there are still many uncertainties associated with the BWA technology. When will equipment be commercially available? How will the handsets look like - the size, the weight, the battery life? What will be the coverage, the indoor penetration, etc? Existing technologies certainly have established their foothold by the time the BWA technology enters the market. If the existing technologies still cannot compete effectively with the BWA technology, it may well be that the new technology is actually better. In that case, it is even more important to consumers and users that access to the new technology should not be delayed.

The role of the regulator

In any case, it is not for the regulator to decide whether there should be fixed-mobile convergence or the pace of it. The regulator should only facilitate fixed-mobile convergence if there is a demand for it. This means that the regulator should prepare the environment so that market forces will guide the direction, the extent and pace of fixed-mobile convergence.

To facilitate fixed-mobile convergence, we have to identify and remove the obstacles to the realisation of the convergence.

The unified carrier licence

The separate licencing arrangement for fixed and mobile carriers is one of the obstacles. In the scope of service under the current carrier licences, the licensee is authorised to provide only a particular class of services – fixed services or mobile services. Therefore if a network is capable of providing both fixed and mobile services, this cannot be accommodated unless the operator takes out two licences. Then there is the uncertainty of under which of the two licences is a converged service regulated.

Therefore we have issued a consultation paper on unified carrier licence which can be used to license fixed services, mobile services and converged (fixed and mobile) services.

Some operators are worried that once the unified carrier licence is implemented, suddenly, all fixed carriers will be able to offer mobile services, and all mobile carriers will become fixed carriers as well. This is not the intention.

The unified carrier licence just provides the flexibility of authorising both fixed and mobile services under the same licence. The detailed scope of service will be specified in the schedules of individual licences. It is quite possible that some operators under a unified carrier licence is authorised to provide fixed services only, and some, mobile services only.

Licensing criteria

For a fixed carrier to provide mobile service, it must first of all gain the right of access to the necessary spectrum. Therefore it cannot operate mobile services simply by applying for conversion to a unified carrier licence.

Similarly, applications for the operation of a fixed service would be subject to the same licensing criteria as for existing fixed network services, i.e. they must have a genuine plan to invest in and roll out infrastructure to provide a public service. Under the existing licensing criteria, fixed carrier licences will not be issued to an applicant that intends to provide services to itself or its affiliated companies only, or to rely primarily on interconnection with the infrastructure of other network operators in the rollout of its network. Similar licensing criteria should be applied to the applications for operation of fixed services under a unified carrier licence. We are also considering the need to incorporate the proposal for network rollout into the licence as binding commitments.

Access right to buildings

Unified carrier licensees will not be able to use access right into buildings to compete unfairly with mobile network operators. Under the existing policy, section 14 access right will be granted to operators to install telecommunications lines and equipment in the common parts of a building to serve residents and occupiers of the building only. Therefore suppose the unified carrier licensee deploys a BWA hub to serve a region around the building, it will have to negotiate access to the hub site on a commercial basis as for other mobile network operators.

Road opening right

Similarly, the granting of road opening authorisation should be subject to the same considerations as those that apply to fixed carriers at present. Before OFTA supports a road opening proposal, OFTA will consider whether the licensee has a need to open up roads. We will look at the scope of services authorised under the licence. If the licensee is just authorised to operate wireless services, perhaps there is no need to open up roads. Secondly, space underneath roads or pedestrian pavements for telecommunications ducts is a scarce resource. Road opening may cause severe inconvenience to pedestrians and traffic disruptions along some routings. Therefore OFTA will have to consider whether spare ducts along the same routing can be shared. The same coordination procedures will be carried out as for existing fixed network operators.

Harmonisation of licence conditions

Ideally, we would like to harmonise the licence conditions for fixed and mobile services, so that the same conditions will apply to both fixed and mobile services. The harmonised conditions will then apply to the converged services.

We have actually studied this question in preparing the unified carrier licence. We cannot do it for all conditions from day one of the availability of the unified licence.

For most of the licence conditions like accounting practices, tariffs, billing and metering accuracy, etc., there would be no problem for the same licence conditions to be applied to both fixed and mobile services.

But for some, harmonising the licence conditions for fixed and mobile services will involve careful review and consultation to examine the impact on the consumers, the operators and the market.

Numbering plan

One obvious example is the allocation of numbers. At present, fixed numbers and mobile numbers are allocated from different numbering blocks with

different prefixes. The prefixes contain important information for operators to handle interconnection charges and number portability. Until the questions of harmonising interconnection charges and number portability are settled, we would still need to maintain the separate numbering blocks for fixed and mobile services. We then have to consider if converged services should be accommodated in the fixed or mobile numbering blocks. Fortunately, the licence conditions allow some flexibility in this area. Like existing licences, the unified licence will just require the licensees to conform to a numbering plan formulated by the TA. The TA will continue to consult the Telecommunications Numbering Advisory Committee in updating the numbering plan to cope with market development.

Interconnection charging

The industry is very interested in the harmonisation the interconnection charging arrangement. As usual, there are two camps of opinion. You are familiar with the symmetrical interconnection charges between fixed networks (under which the originating fixed network pays the terminating fixed network for termination of a call), and the asymmetrical interconnection charges between a mobile network and a fixed network (under which it is always the mobile network paying the fixed network for call origination and termination). The separate sets of interconnection charging arrangements would not be sustainable in a fixed-mobile convergence environment. Harmonising these to a symmetrical arrangement would involve lowering the costs of the mobile network operators and raising the costs of the fixed network operators. Apart from the re-distribution of the revenue from the consumers and users, whether this would produce a net benefit to the consumers and users remains to be studied. Therefore OFTA intends to carry out an economic study with the assistance of a consultant to work out the cost-benefit of such a change. OFTA will then consult the industry about the change.

Number portability

Another regulatory requirement which may need harmonisation or integration is number portability. At present, there are fixed number portability and mobile number portability, but no fixed-mobile number portability. In the unified licence, we intend to maintain initially the existing obligations on fixed number portability and mobile number portability. The implementation of

fixed-mobile number portability would bring convenience to some consumers and possibly spur further competition in the industry. It will also involve additional costs on the industry to upgrade the existing databases and administrative systems. OFTA also intends to carry out an economic cost-benefit study before consulting the industry on whether to implement fixed-mobile number portability.

Directory services

Yet another example is the provision of directory services, including printed directory and directory enquiry service. For fixed service, it is the obligation of the operator to provide a unified directory service to customers of fixed lines. By unified directory service, I mean a unified printed directory and a unified directory enquiry service based on a database comprising the information of all fixed line customers in Hong Kong. For mobile services, this corresponding obligation does not exist at present. Most mobile customers would regard their numbers to be “personal data” and do not want them to be disclosed in a directory service. Consultation with the public is required on the treatment of the directory data for converged services.

Regulation evolution

Some raise the issue that with so many changes in the pipeline, the government should wait until the completion of the reviews before offering the BWA spectrum to the market. I think this is not necessary. If BWA is a technology that would bring values to consumers and operators, then access to the technology should not be unnecessarily delayed. The regulatory system is expected to evolve over time to cope with market and technological developments. For example, the regulation of fixed network market has undergone many evolutions during the past 10-year period since the grant of competitive licences – from partial liberalisation in 2000, to full liberalisation in 2003, to setting a sunset date for Type II interconnection and change of *ex ante* regulation of the incumbent operator to *ex post* regulation. The uncertainties arising from the review of the interconnection charges and number portability arrangements do not just apply to investments in BWA, but also to all existing fixed and mobile network operators. It would not be realistic for the regulation to remain static during a licence period. To minimise the impact caused by the regulation evolution, all changes will be

decided and implemented after full and open consultation of the industry.

Conclusions

In summary, the introduction of the unified carrier licence is but an administrative exercise to facilitate the evolution of the regulation to cope with fixed-mobile convergence. There is no immediate and fundamental change brought to the regulation. The evolutions ahead will be subject to open and full consultation.

What I have said in this presentation represents my preliminary views, for the purpose of discussions in this seminar and in the consultation period. I look forward to your views and feedback before finalisation of the regulation for fixed-mobile convergence.

Thank you.