WBT Inquiry
Submission No. 43

GOLD COAST CITY COUNCIL SUBMISSION TO HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON COMMUNICATIONS, INFORMATION TECHNOLOGY AND THE ARTS INQUIRY INTO THE CURRENT AND POTENTIAL USE OF WIRELESS TECHNOLOGIES TO PROVIDE BROADBAND COMMUNICATIONS SERVICES IN AUSTRALIA

COMMENTS AGAINST Terms of Reference

The terms of reference for the Inquiry is to report to the Standing Committee on the "current and potential use of wireless technologies to provide broadband communication services in Australia, including regional Australia, having particular regard to the following:

- The current rollout of wireless broadband technologies in Australia and overseas including wireless LAN (using the 802.11 standard), 3G (e.g. UMTS, W-CDMA), bluetooth, LMDS, MMDS, wireless local loop (WLL) and satellite;
- The interrelationship between the various types of wireless broadband technologies;
- The benefits and limitations on the use of wireless broadband technologies compared with cable and copper based broadband delivery platforms;
- The potential for wireless broadband technologies to provide a 'last mile' broadband solution, particularly in rural and regional areas, and to encourage the development and use of broadband content applications;
- The effect of the telecommunications regulatory regime, including spectrum regulation, on the development and use of wireless broadband technologies, in particular the Radiocommunications Act (1992), the Telecommunications Act (1997), and Parts XIB and XIC of the Trade Practices Act;
- Whether Government should make any changes to the telecommunications regulatory regime to ensure that Australia extracts the maximum economic and social benefits from the use of wireless broadband technologies; and
- Likely future national and international trends in the development and use of wireless broad band technologies."

1. The current rollout of wireless broadband technologies in Australia and overseas including wireless LAN (using the 802.11 standard), 3G (e.g. UMTS, W-CDMA), bluetooth, LMDS, MMDS, wireless local loop (WLL) and satellite;

Information and Communications Technology industries have already demonstrated tremendous growth, spurred by new technologies such as the Internet and wireless technologies. The transition to a high-tech economy is occurring, as much, if not more, on the Gold Coast, as nationally. ICT related products and services provide inputs to almost all other industry sectors and to the consumer market. Importantly for this industry, the availability of high speed, cost effective bandwidth is now becoming a reality at the Gold Coast with the increasing provision of fibre optic cable and other technologies by Powertel, UEComm, AAPT, Telstra, Optus, Austar, and others. This has been, in large part, due to Council's Pacific Innovation Corridor initiative, which has concentrated on transforming the Gold Coast city into a globally connected innovation, human capital and technology "hot spot", and the development of a knowledge economy.

However, the "last mile", is as much an issue on the Gold Coast as for other parts of Australia, and wireless broadband may represent a cost-effective solution to the final hurdle of cost-effective end-consumer service delivery. Indeed the Gold Coast City Council itself, as an example, is using licensed microwave and radio for its mobile workforce and for communication of data between sites which did not or do not have other infrastructure available. Additional, more detailed information regarding the current technologies and infrastructure elements being used within the Gold Coast region currently can be provided at the Inquiry's visit to the Gold Coast on July 9.

Gold Coast City Council currently sponsors a local telecommunications committee which is dedicated to encouraging the utilisation of broadband technologies in the Gold Coast region. The committee includes industry, academic and government (both local and state) representatives. The committee considers issues such as local service aggregation, emergent technologies (including wireless broadband), industry clusters and many other telecommunication relevant issues within the Gold Coast Region.

2. The interrelationship between the various types of wireless broadband technologies;

It is essential that Australia does not pre-commit to standards that are at risk of becoming unique to Australia. Essentially the cost to Australia to either maintain standards inconsistent with international standards, and/or to refit at a later date to comply with another standard would be substantial. It is preferable to maintain a non-committal stance with regard to standards until it is clear that international standards have been reached. Therefore it is important that the Inquiry carefully consider the recommendation of standards in the development of the wireless broadband market.

3. The benefits and limitations on the use of wireless broadband technologies compared with cable and copper based broadband delivery platforms;

In reality it is the applications to which telecommunications can be applied and the total cost of provision that are the chief issues of concern for consumers. Consumers will not care whether their data is being provided by wireline or wireless services, but will care about attributes such as interoperability, security, stability, continuity, throughput and costs. Essentially the market will decide what combination of technologies provides the best return for investment.

However, the issue of interference between users of spectrum represents a limit in terms of the density of applications to which spectrum can be applied. Additionally, the cost of connecting to pre-existing wireline backbone is also very high, representing a dilemma for regulators. Only a limited number of users can use spectrum at useable levels of quality, however a cost incentive may drive demand for spectrum beyond supply. This disjoint between availability of a public good such as spectrum and demand, could lead to profiteering, where spectrum is secured purely for its value and left unexploited. Regulation may be required to ensure that the community obtains an optimal return for spectrum through granting spectrum for sole use in exchange for community compensation. Essentially this involves ensuring that the community's lost opportunity represented in the granting of sole use is compensated for through the charging of fees, which may be used to decrease community burden elsewhere.

4. **The potential for wireless broadband technologies to provide a 'last mile' broadband solution, particularly in rural and regional areas, and to encourage the development and use of broadband content applications**

As mentioned above, the Gold Coast region's experience is in concert with the existence of a "last mile" issue. Though relatively well serviced by fibre optic backbone, take-up of broadband has been stifled due to the significant connection costs from the end user back to the fibre optic backbone. This has led to a relative under-utilisation of the backbone wire-line resource. The Gold Coast (via both Council and private sector groups) is very supportive of future investigation into wireless broadband technologies as a potential solution to the "last mile" issue.

As demands for radio frequency spectrum increase, it will be important to ensure that planning of bandwidth allocation ensure the needs of rural/regional areas are considered over metropolitan areas, which are already well serviced by wireline infrastructure. In many rural/regional areas, wireless is the only viable option and it would not be in the best interests of Australia as a whole were metropolitan wireline services to be duplicated by wireless if it were at the expense of providing rural/regional services. This is particularly the case for low frequency spectrum, which is more robust to weather conditions but is more likely to cause interference.

5. **The effect of the telecommunications regulatory regime, including spectrum regulation, on the development and use of wireless broadband technologies, in particular the Radiocommunications Act (1992), the Telecommunications Act (1997), and Parts XIB and XIC of the Trade Practices Act;**

Local Councils are best placed to understand local community desires regarding social, cultural and environmental preferences of the local community balanced against its desire for economic progress. Telecommunications hardware including those of wireless broadband technologies generate issues with regard to their location, service coverage, impact on visual amenity, interference with medical and other scientific devices, etc. Local Councils, are well placed to provide decision making which could be more aligned to individual local community interests than any other level of government. This potential contribution should not be overlooked in any recommended modifications to the regulatory regime effecting wireless telecommunications.

Although limited to ITU agreements, Australia has some flexibility in its functional allocation of spectrum. Spectrum must be allocated in such a way as to maximise community benefit (i.e. economic benefit, cultural benefit, environmental sustainability etc). Wireless broadband and other recent spectrum dependent technologies may deliver greater benefit within currently allocated spectrum and therefore, it is valid to not limit consideration of potential spectrum opportunities purely to unallocated spectrum.

6. **Whether Government should make any changes to the telecommunications regulatory regime to ensure that Australia extracts the maximum economic and social benefits from the use of wireless broadband technologies;**

It is important that a review of the benefits and learnings from the rollout of wireline over the last decade is undertaken, especially the ways in which telecommunications regulation has supported or hindered the value obtained from this industry. Such a review should help inform a government response to wireless.

The Inquiry should not only consider the wireless technologies per se, but also the associated framework including the source of personnel and skill-sets required to install and maintain wireless infrastructure, the implications of the availability of the opportunity for Australia to value-add to the technologies, the potential roles and responsibilities of the various regulators (including local

government) in the industry. Improvements in cooperation between users, regulators and providers should be one of the goals of the recommendations from the Inquiry.

7. Likely future national and international trends in the development and use of wireless broad band technologies;

Most major international trends are focussed on developing commercially lucrative applications suited (in most circumstances) to high-density and metropolitan markets. The development and take-up of wireless broadband services are both expected to be slower than had once been anticipated.

Prior to the steep decline in stock market fortunes, broadband wireless access seemed to be the perfect low-cost entry vehicle for alternative carriers into an emerging broadband market dominated by incumbent telephone companies. During 2000 and 2001, telecommunication providers paid unprecedented amounts for third generation ('3G') licenses, and are now scrambling to develop viable service offerings to offset huge debt loads and record losses.

Emerging offerings such as internet-based mobile phone services (also known as General Packet Radio Service (GPRS)) appeal to providers who charge an array of fees for access to their networks (roaming fees and termination charges together account for up to 40 percent of revenues for some wireless operators).

Other examples of emerging technology trends include Enhanced Data GSM Environment (EDGE) - a faster version of the Global System for Mobile (GSM) wireless service, and Universal Mobile Telecommunications System (UMTS) - a broadband, packet-based system offering a consistent set of services to mobile computer and phone users no matter where they are located in the world.

The right environment needs to be created to influence the deployment of wireless broadband offerings to target other than the densely populated centres with more affluent and technology-savvy consumers. However without some intervention, this is unlikely to happen as most trends in the use of broadband technologies to date (including wireless) target the more lucrative metropolitan markets. The Gold Coast City's key priorities are focussed around cost-effective solutions for unresolved 'last mile' issues and servicing a large rural/regional (as well as urban) population base. It would be highly desirable for the inquiry outcomes to clearly articulate how the role of wireless broadband can contribute to resolution of these issues.

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