

## **SETEL Response to VoIP Quality of Service (QoS) Discussion Paper**

### **Introductory Comments**

SETEL viewed the discussion paper from two perspectives, one as a user of VoIP services and, to a lesser degree due to the technical issues involved, the need to establish a reasonable set of standards to enable a suitable quality in the delivery of VoIP services. We do not have the technical expertise to be able to comment on the bulk of the issues raised in the paper and have restricted our comments to those of a general nature. Where we refer to QoS in this paper we mean general quality of service from the user's perspective. For clarity we have used IQoS to refer to arrangements between service/network providers.

On the latter point we tend to favour the development of standards applicable to 'business grade' services rather than the 'cheap and cheerful' options that are bound to proliferate as this sector of the industry expands. Quality and reliability have greater weighting for small businesses than price in terms of services used in conjunction with business operations.

However, our experience with the ISP Peering Cost disparity suggests that a too heavy application of QoS standards can create unacceptable levels of dominance by the larger suppliers in the industry thus leading to a lessening of competition and possible inhibition of innovation.

It is SETEL's belief that standards for Quality of Service (QoS) will be required to achieve the widespread uptake of VoIP amongst small businesses. A lack of standards for VoIP calls may be marred by echo, drop out and jitter. QoS standards will be critical for assured service levels and, will be essential for small businesses (and probably many others) to enter the VoIP consumer market.

Without standards, it is likely the uptake of VoIP will be sporadic because:

- It will be limited to early adopters of technology (and small businesses notoriously do not belong to this group). Early adopters are prepared to take risks and usually have the confidence to set up VoIP themselves. As well, they maybe prepared to put up with dropouts of voice packets etc.
- Current suppliers of VoIP equipment vary tremendously in their levels of competency and experience. The likelihood that all suppliers will follow best practice in the marketing of VoIP is slender. Moreover, 'fly-by-night' operators seeking to make a quick dollar from unsuspecting consumers are likely to enter the market. Adverse publicity and dampened enthusiasm for VoIP are likely to result.
- Already research undertaken by Ms Shara Evans of Market Clarity, has shown a number of VoIP promotions contain gross misinformation in critical areas such as contractual rights; equipment compatibility and requirements etc, some of which will affect QoS. This too will add to levels of dissatisfaction.
- Uptake of VoIP will favour those with access to IT resources, or those who possess technical know how, and small businesses in general do not have such expertise, nor the time to skill-up.

Standards will be critical for a wider uptake of VoIP by the small business sector. QoS equates to reliability, a key consideration for small businesses when purchasing technology. Dependable telecommunications have become an integral aspect for small businesses and QoS for VoIP must be guaranteed.

VoIP has much to offer the small business sector and not just in terms of cheaper calls. The additional functionality from VoIP has the potential to increase efficiencies by way of improved communications with customers and suppliers. In the process of developing VoIP QoS standards SETEL requests that sufficient consultation with consumer groups be undertaken.

(VoIP systems referred to in this response do not relate to Skype and similar systems.)

### **VoIP QoS standards will achieve the following goals for small businesses.**

#### Standards will assist the longer-term viability and sustainability of the VoIP market

Standards for VoIP QoS will provide assurances for the small business consumer market and will help increase the uptake of VoIP.

The risk of failure in a new technology market (such as VoIP) is high and the telecoms market is littered with products that have promised much but delivered poorly. Often new technology markets contain renegade suppliers offering sub-standard services, hence the reputation of many quality VoIP suppliers may be compromised or ruined by a few.

If the VoIP market were to be corrupted by substandard VoIP services it will take considerable effort to win back the confidence of small businesses as well as many other consumers to this market.

#### Independence of standards

The introduction of standards by a government organisation (provided those standards are based on advice from technical experts, and in consultation with consumers) will ensure a dominant player or, players do not use their market power to dictate overly prescriptive or sub-standard levels of performance of QoS for VoIP.

#### Standards support innovation

QoS standards will ensure that innovation focuses on producing services that are consumer oriented. In turn standards are likely to increase the demand for products and services that meet these standards, thus making it more rewarding financially for innovators. Standards help to reduce waste of research resources and remove guesswork by lessening the chance of producing goods and services that do not meet consumer needs.

#### Foster more well-defined boundaries for competition

With the prospect of churn, competition will more likely focus on, perhaps, a superior range of consumer focused VoIP services that meet QoS standards.

### Equal Accessibility to all.

SETEL advocates programs and policies that encourage all small business consumers to take up new technologies. Examples include programs to install broadband infrastructure that support convergent technologies such as VoIP.

Given that high speed broadband is important for most VoIP services it is likely the uptake of this technology will highlight black holes of broadband access i.e. areas of low broadband speed or Dial Up which may not support VoIP. Groups, classified by either location or need, of disadvantaged consumers may require additional consideration in the formulation of standards.

### Help to promote collaborative dealings between suppliers

Interoperability issues and increased complexity of convergent technology, plus the need to reduce costs, provide opportunities for collaborative efforts between suppliers/producers. Collaboration can lead to product improvements and cheaper products. The introduction of standards provides additional impetus for collaboration.

### **Standards for VoIP QoS will address specific needs of small businesses such as:**

#### Eliminate the need for small businesses to become IT experts

SETEL maintains that it is unreasonable to expect small businesses to become IT experts to take up new ICT applications. The initial failure of e-commerce in the small business sector was due to the onus placed on small businesses to become IT experts, that is, the requirement to quickly understand aspects such as broadband; web design; Internet protocols; domain names and so on.

As well, small businesses had to cope with technical malfunctions; budget blowouts and results that did not meet the hype. Resentment was felt among small businesses because e-commerce distracted them from their core business – that of, running a small business. The same applies to QoS for VoIP.

Many small business operators do not readily understand new technology nor do they have the inclination. Providers of new telecoms technology must grasp this fact and that small businesses are the least likely to take up new technology for the sake of it.

#### Reduce the need for small businesses to use limited time resources to purchase VoIP

Small businesses are incredibly time poor. QoS standards can help reduce the time taken by small businesses to research VoIP. ABS survey data on the use of ICT by small businesses has regularly found that many small businesses do not have the luxury (in terms of expense or time) to employ an IT consultant or, to spend the time themselves to skill up on new ICT such as VoIP.

#### The need for interoperability (or ‘any to any’)

VoIP is not a simple ‘plug and play’ application. The wide range of suppliers and equipment, on one hand provides flexibility of choice, but it also adds complexity.

Standards must be introduced to ensure QoS of calls neutralises the complexity of VoIP equipment for small businesses.

Help small businesses to avoid unscrupulous providers and provide standards that apply to non-Telco providers of VoIP

The competency and experience of VoIP suppliers varies widely and small businesses may be preyed upon by fly-by-night operators seeking to exploit those who possess minimal technical expertise.

Standards must be introduced that apply across all suppliers of VoIP. As with mobile phones and other devices, sellers of VoIP may not work within the telecoms industry and may include IT outlets and other retailers (such as Harvey Norman etc.)

Protect small businesses from substandard equipment produced overseas

It is expected a significant proportion of VoIP software and hardware will be made overseas and small business must be protected by Australian standards for QoS.

Allow small business consumers to switch services that better suit their needs

With the knowledge that consumer safeguards (i.e. QoS standards) are in place and that these apply to new and emerging VoIP services, small businesses will be able to take up improved products and services as they reach the market. (Note: Small businesses will still need to heed early contract termination charges if they apply.)

QoS standards provide positive input to the value proposition for small businesses

For technology to be adopted by small businesses it must represent a positive value proposition. Many technology providers overlook this proposition which comprises many factors such as whether a new technology saves time; saves money; generates revenue; helps run the business more smoothly; improves communications with customers; allows more time to be spent on the core business; plus the degree of reliability; availability of back up support; etc.

Against this, a small business will weigh up the costs such as staff training; installation costs etc for both the longer term and the short term.

Suppliers often overlook the fact that price is not the sole determinant, and a cheap service does not necessarily mean saving money when running a small business. A Telstra Small Business manager recently said new technology was badly marketed to the small business sector, because promotions emphasised the technology rather than the benefits of the technology. This partially addresses the value proposition.

Reduce the incidence of blame passing or passing the buck.

Because numerous parties are involved in the supply of VoIP (such as hardware/software suppliers, Telcos, ISPs etc.) QoS standards could help reduce the opportunities for passing the buck should VoIP QoS not be up to scratch.

## Technology for small business needs to address the demographics of this sector

The demographics of the small business sector are often overlooked by technology suppliers, but they do provide key indicators of the needs of small businesses. For example, the majority of small business operators are aged 40 or more years; they are not as ICT literate as their younger counterparts; they are not early adopters of technology; they attended school when a PC on each desk was not the norm; and, a good many still do not own a PC at home.

Hence standards for QoS will help small business operators by providing some assurance and reduce the need to understand concepts such as real time usage, voice packets, jitter, latency etc.

## QoS standards should cover technical backup

Small business operators may not be able to resolve QoS issues themselves and, without their own IT resources, QoS standards will mean little without access to technical assistance. Therefore QoS standards must be enforceable and should cover aspects such as technical support.

The factors mentioned above are the basis of current SETEL telecommunications policies. Many of these elements have been expressly endorsed by the Federal Government by including them within their own government plans for telecommunications infrastructure and convergent technology of the future.

## **Enforcement of standards**

Related to the issue of standards is SETEL's major concern regarding the enforcement of VoIP QoS standards. Two issues of concern arise. Firstly, most small business consumers are not aware of telecommunications industry standards and codes, let alone their rights, hence public awareness campaigns will be required. Secondly, the enforcement process for QoS standards for VoIP should not be left to the TIO (Telecommunications Industry Ombudsman).

The TIO process is slow, cumbersome and requires too much work on behalf of the small business consumer. The TIO was set up and is equipped to operate as a last resort for disputation resolution not as the first point of call for the complainant.

## **Summary**

VoIP has the potential to boost small business productivity through more effective and efficient telecommunications. Standards for QoS will be necessary for the successful uptake of VoIP and to help avoid potential pitfalls that are largely due to the complexity of VoIP and the multiple suppliers of hardware and software required for a small business to run a VoIP application.

Without QoS standards VoIP calls may range from acceptable to highly unsatisfactory.

The concerns of the demand side may be largely addressed by the application of appropriate user-QoS supported by a measured implementation of IQoS. A contention rate of 1:1 may be excessive in terms of an industry requirement but on the other hand a rate of 100:1 is highly unlikely to provide the required user-QoS.

Similarly the application of very prescriptive IQoS may restrict market entry and participation by providers that can adequately service users' needs. So a balance is required in terms of the standards applied.

Given the growing complexity of ICT, SETEL favours the adoption of standards of the type/grade generally applicable to the telco market. End-to-end connectivity is a very important factor for small business users of communications services. This may not be guaranteed under services supplied partly or totally without telco grade facilities.

SETEL believes that sufficient opportunity for the ongoing development and supply of innovative and useful (meeting the value proposition of small businesses) services is likely to occur through the higher-level telco grade market. There is a place for the cheaper service offerings but it is unlikely that the structure of a self-regulatory industry body such as ACIF would be able to significantly influence the activities of their suppliers.

SETEL  
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