REACH LTD.

SUBMISSION TO THE TELECOM AUTHORITY OF INDIA (TRAI)

IN RESPONSE TO THE TRAI CONSULTATION PAPER ISSUED IN DECEMBER 2006

ON

REVIEW OF INTERNET SERVICES

(CONSULTATION PAPER NO. 19/2006)

SUBMITTED TO THE TRAI ON

15 JANUARY 2007

PART A. OUTLINE

Reach Ltd. (**REACH**) provides this submission in response to the Telecom Regulatory Authority of India's (**TRAI**) Consultation Paper on *Review of Internet Services* (**Consultation Paper**).

Our comments are made on behalf of our subsidiary, Reach Network India Private Limited. This entity is the holder of an Internet Service Provider (**ISP**) Licence in India under which it supplies a range of internet services.

Summary

REACH supports the general direction of reforms proposed in the Consultation Paper to regularise the licensing of ISPs and permit the progression of ISPs to unrestricted IP telephony. The growth of competition in the internet services market following a removal of regulatory barriers to market entry will promote the development of innovative customer services to the benefit of Indian consumers.

REACH also supports the TRAI's goal to create a "level playing field" between operators competing in the provision of internet services. However, REACH submits that a "level playing field" does not require "regulatory equality" so that each of the different categories of operator is subject to the same fees and obligations. In many cases there are substantial reasons to distinguish between the different fee structures and regulatory obligations imposed on different classes of operators. The regulatory measures directed at creating a "a level playing field" would be better focused on ensuring ISPs have appropriate access to necessary facilities at a competitive prices so as to permit the ISP to compete in the provision of ISP services to end users.

REACH is not concerned with the large number of "inactive" ISP licensees and does not see a pressing need for regulatory measures to address these licensees. Regulatory measures to ensure only "serious players" become licensed may function as barriers to market entry which restrict competition. REACH considers it is better for the promotion of competition and the development of internet services that barriers to entry are minimised and acknowledges that this may result in a large number of "inactive" ISP licensees in the short term. "Inactive" ISPs are failed market entrants and REACH anticipates the number of inactive licensees declining as the market rationalises and absorbs the impact of the latest round of reforms.

REACH notes that the Consultation Paper does not discuss in detail the implementation plan for the proposed rationalization of ISP licensing. REACH anticipates further consultation on this point. REACH submits that any implementation plan must:

(a) minimize the imposition of regulatory barriers to entry; and

(b) to the extent possible ensure continuity in the regulatory regime so as to maintain investor confidence in the industry and promote industry rationalisation.

PART B. QUESTIONS FOR CONSIDERATION

Q1.	At present, there are 389 licensed ISPs out of which only 135 are offering Internet services. Top 20 ISPs cater to 98% Internet subscriber base. In your view, is there a rationale for such a large number of ISPs who are neither contributing to the growth of Internet nor bringing in competition in the sector? Suggest appropriate measures to revamp the Internet service sector.

Reasons for inactive ISPs

REACH acknowledges the TRAI's concerns that there are a large number of ISP licensees who appear to be inactive (or have a very small customer base). REACH understands why the TRAI may believe this large base of inactive ISP licensees may be indicative of a large "grey market" of illegal VoIP services.

REACH respectfully suggests that the large number of inactive ISP licensees may alternatively be indicative of the high barriers to entry and restrictive service scope the current licensing policy has imposed on ISPs. Restrictions like that placed on the types of permissible VoIP may have prevented ISPs developing long-term business objectives after they became licensed, leading many ISPs to become inactive.

It is also possible that the inactive ISP licensees are the result of other market factors. As illustrated in the table below, India's IP Transit prices are high by international standards. IP Transit prices are a reflection of the cost of capacity to access overseas providers and overseas

parties accessing Indian sites. Reform in the IPLC market will address this issue, and REACH refers the TRAI to its submission in the IPLC Consultation the TRAI is currently conducting[1].

Table 1: India and China Full Circuits to Singapore

Average TeleGeography Monthly Lease Prices

---------- In US$ ----------

Beijing	Hong Kong	Kuala Lumpur	Manila	**Mumbai**	Seoul	Singapore
108	109	446	338	**1,215**	129	245
Sydney	Taipei	Tokyo	Bratislava	Budapest	Moscow	Prague
448	220	131	30	43	200	40
Warsaw	Buenos Aires	Rio de Janeiro	Santiago	Sao Paulo		
42	196	192	223	192		

Source : TeleGeography's "Global Internet Geography 2007", Primetrica Inc.

Note: Information restricted to DS-3 based Mbps prices for Q2 2006 as the only capacity and period for which Mumbai data available.

In the absence of a detailed empirical study, it is impossible to state with any certainty why so many ISPs are inactive. Reform based on assumptions or anecdotal evidence may do more harm than good. For example, it would be counter-productive for reforms to impose more regulatory burdens if licensees are already becoming inactive due to existing burdens or service restrictions.

[1] REACH Ltd. *Submission to the TRAI in Response to the TRAI Consultation Paper issued on 22 December 2006 on Resale in International Private Leased Circuits*, 15 January 2007.

In any event, REACH submits that the number of inactive ISP licensees is in keeping with other jurisdictions and is not an undue cause for concern in India.

- Other rapidly developing markets have experienced this high degree of "inactivity" after new licensees became aware of the difficulties of conducting an internet services business. Indonesia, for example, had more than 150 ISP licensees but only 40 ISPs were operating in 2001[2].

- Fully liberalized and highly developed markets are also marked by a large number of "inactive" or small-scale ISPs. REACH submits this is indicative of a competitive market and has a positive impact on consumers. For example, in Australia the regulator has recently reported (November 2006) that there are 689 ISPs[3] of which 250 currently offer broadband services[4]. The ten largest ISPs serve 77% of subscribers[5]. There are 180 ISPs with less than 100 subscribers, and another 312 ISPs with less than 1000 subscribers[6]. Additionally, there are currently 231 VoIP providers in Australia, the vast majority of them ISPs[7].

India's current ISP industry profile does not justify regulatory measures that restrict competitive entry

While REACH understands the TRAI's concerns over inactive ISP licensees, REACH submits that these concerns do not justify the imposition of additional barriers to entry to the internet services market. Ease of market entry (and exit) are commonly acknowledged indicators of competitiveness in a market. Imposing inappropriate roll-out obligations, requiring minimum customer bases/annual revenues or other such measures will impede market entry and inhibit the further development of a vibrant competitive internet service provider industry.

The opinion expressed by the TRAI suggesting that small ISPs "neither contribute to the growth of the Internet or bring competition in the sector" is misplaced. Small ISPs, such as the close to 500 Australian ISPs with less than 1000 subscribers, play a vital role in serving niche geographical and functional markets. These small ISPs have the opportunity to innovate services

2 INDOCISC *Indonesian Internet statistics*. Available at www.indocisc.com.

3 ACMA Communications Report 2005-2006, Australian Media and Communications Authority, November 2006, pages 61-64. Available for free download from: http://www.acma.gov.au/acmainterwr/_assets/main/lib101030/cr%2005_06%20complete.pdf

4 See list of Australian ISPs offering broadband services at: http://bc.whirlpool.net.au/bc-list.cfm?loc=0

5 ACMA Report supra, page 62

6 ACMA Report supra, page 63

7 The current list of Australian VoIP providers and the nature of the services can be found at: http://www.marketclarity.com.au/voip/

and grow their business over time. There are many regional ISPs operating in Australia, serving small communities and local businesses. A well-known Australian example is Shoalhaven Internet, which is based in a regional coastal community a couple of hours south of Sydney (see http://www.shoalhaven.net.au/), and has constructed facilities to provide wireless broadband services to reach subscribers in remote coastal and inland locations. There are also many small ISPs that target very specific business applications and customers, particularly where smaller businesses wish to outsource their IT needs. These business-directed ISPs are providing innovative value-added services such as web-design and hosting, real-time telemetry applications, electronic data interchange, etc., and do not seek consumer subscribers at all. It is not unusual for these small Australian ISPs to only have a handful of customers - they are small businesses, often serving other small businesses.

Recommendations

REACH submits that inactive ISPs in India are either failed market entrants or companies who have not yet found market opportunities. It is REACH's view that the number of inactive market entrants will decrease over time without the need for regulatory intervention as:

(a) the licences of failed market entrants expire and are not renewed; and

(b) the industry absorbs the impact of new reforms rationalizing the range of services ISPs may provide (creating more market opportunities for existing licensees); and

REACH also submits that the prevalence of small scale ISPs is an indication of competitive activity, and the TRAI should avoid any measures that may force smaller operators from the market. Small ISPs may be focused on particular regional community needs or specialized customer segments and their activities should be actively encouraged by the TRAI.

Q2.	Due to limited availability of spectrum for wireless broadband access, and high cost of creating last mile infrastructure, many ISPs are left with only option to provide Internet dialup access services. With increasing penetration of broadband, what efforts are required to ensure viability of such ISPs in changing scenario? Please give suggestions.

Existing and historical limitations on infrastructure deployment in India and the absence of alternative access networks create particular challenges to the development of a competitive ISP

market in India. Nevertheless, and within technical restraints imposed by the existing fixed line network, REACH believes that a competitive market would mean larger numbers of Indian consumers will be able to move from dial-up to broadband internet speeds.

For example, equal access for all ISPs to Wifi/WiMAX spectrum may increase availability of high speed internet access in India. As mentioned in paragraph 2.9 of the Consultation Paper, TRAI has recommended the allocation of spectrum to facilitate wireless operation[8]. Obligations imposed as part of this spectrum allocation could ensure all operators have the opportunity to compete using Wifi technology and would maximise the efficient use of this scarce resource.[9] This is discussed in more detail in response to Consultation Question 8. Although network congestion may ultimately be a limiting factor, REACH submits that Wifi is presently a viable and lower cost means of upgrading the majority of India subscribers to higher speed services.

Q3.	At present limited services are permitted under ISP licenses. There is no clarity in terms of some services whether they can be provided under ISP licenses. Do you feel that scope of services which can be provided under ISPs licenses need to be broadened to cover new services and content? Suggest changes you feel necessary in this regard.
Q4.	UASL/CMTS licensees have been permitted unrestricted Internet telephony however none of them are offering the service. ISPs (with Internet telephony) can provide Internet telephony within the scope defined in license condition. The user friendly and cheaper devices with good voice quality are increasing Internet telephony grey market. Please suggest how grey market operations can be curbed without depriving users to avail such services?

REACH responds to Consultation Questions 3 and 4 together below.

REACH submits that competition will be promoted in the ISP industry by the regularising of the scope of service restraints imposed on different categories of ISP licences. As outlined in response to Consultation Question 12, REACH supports the proposal to create a two tiered licensing regime with:

[8] REACH does not comment on the appropriateness of the proposed spectrum allocation recommended by the TRAI.

[9] Access obligations were included in the Hong Kong allocation of 3G spectrum to ensure MVNOs had the opportunity to compete using this spectrum.

(a) "plain ISPs"; and

(b) ISPs migrating to UASL for unrestricted telephony.

REACH submits that it is important for ISPs to be permitted to offer a wide range of different services as part of an overall "package" to consumers. ISPs should be able to provide services as "one bill" to the consumer to minimize confusion and maximise convenience.

REACH submits that all ISPs should be licensed to provide the following services:

- Restricted Internet Telephony by:
    - PC-2-PC within or outside India;
    - PC in India to PSTN outside India;
    - Internet telephony device to Internet telephony device within or outside India;
    - Internet telephony device to PSTN within and outside India;
- IPTV and other content services;
- IP VPN;
- MPLS VPN;
- application based services (email etc).

REACH does not believe it is appropriate for all ISPs to have access to unrestricted internet telephony but supports the creation of a special class for ISPs seeking to migrate to unrestricted internet telephony (subject to different regulatory obligations than "plain ISPs"). The reasons for this are discussed in more detail in response to Consultation Question 12. REACH submits that it is appropriate to limit provision of unrestricted telephony services in this way as an acknowledgement of the significant investment ILDOs have been required to make to acquire licences and deploy network. REACH believes that restricting the limitations on internet telephony so as to prevent PSTN break-out at both A and B ends grants sufficient recognition of the ILDOs' commitments without unduly limiting the development of competition amongst ISPs for other types of services.

Curbing the Grey Market

Any regulatory solution to the grey market is likely to prove only partially effective, and REACH submits that regulatory vigilance is required in monitoring market developments. REACH suggests that the TRAI's resources can most effectively be used to monitor promotional materials for internet telephony to determine if operators are offering grey market services. It is unlikely that substantial businesses can be built through "word of mouth"[10], and grey market activities will be apparent from an analysis of the ISP's website information, public advertisements and even customer terms and conditions (if other sources indicate grounds for a more detailed investigation of the ISP's activities).

Q5.	How to address the issue of level playing field amongst the licensees of UASL, CMTS and ISPs?

REACH understands and supports the TRAI's concern to create "level playing field" amongst operators providing the same services.

REACH does not believe the creation of a "regulatory equality" between the licence fees and regulatory obligations for different kinds of operators is necessary or sufficient to create a level playing field between them. REACH is concerned that the issue of a "level playing field" not be used as a means of shielding UASL and CMTS operators from competitive forces in the ISP market by imposing additional burdens or expense on ISP operators.

REACH submits that the TRAI should, to the extent possible, avoid making any amendments to the current licensing regime so as to impose additional burdens on operators who have already made the decision to invest in ISP services in India. Operators are still in the process of adapting to the last regime change implemented in 2005 (and for ISPs, recent clarification of service scope and licence fee methodology[11]). Further changes at this point would undermine investment confidence in the stability of the regulatory environment in which investment decisions have been made.

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[10] Any "word of mouth" sufficient to build a substantial business would most likely draw regulatory attention in any event.

[11] Department of Telecommunications Communication to all Internet Service Providers (without Internet Telephony) No.813-07/03 –LR, 17 January 2005; Department of Telecommunications Communication to all Internet Service Providers, No.813-07/03- LR, 15 February 2005; Department of Telecommunications Communication to all Internet Service Providers (including Internet Telephony), No 820-1/05-LR dated 3 March 2006.

REACH does not believe the differential licence fees are so skewed as to make the playing field inherently or insurmountably less "level" for UASL or CMSL operators competing in the internet services market. As the TRAI notes in its Consultation Paper, many of the UASL or CMSL operators have established their own affiliated ISP operators and already enjoy the limited regulatory advantages the licence regime affords ISPs in comparison to UASL and CMSL operators.

Furthermore, REACH submits that the higher licence fees imposed on UASL and CMSL operators are appropriate given:

(a) UASL and CMSL operators are permitted to provide unrestricted IP telephony and ISPs are not (REACH does not object to this restriction as set out in answer to Consultation Question 12); and

(b) UASL and CMSL operators retain control of the local access network and have control of substantial backhaul facilities, ISP operators must acquire these facilities from the UASL or CMSL operator as wholesale inputs.

Q6.	The emerging technological trends have been discussed in chapter 3. Please suggest changes you feel necessary in ISP licenses to keep pace with emerging technical trends?

REACH does not propose making detailed submissions on all the issues raised in the discussion of emerging trends in Chapter 3 of the Consultation Paper. In addition to the brief comments below, REACH notes that the pace of change and the possibilities of new technologies identified in the Consultation Paper reinforce the need for a broad scope of services being permitted under the ISP licences in order to avoid forestalling potential new benefits to Indian consumers that may emerge as technology develops.

Migration to NGN

NGN networks provide the same services as traditional communications networks using new technology. The decision to use an NGN infrastructure is complex and ultimately depends on whether or not there will be a cost –benefit to the operator. This evaluation needs to be made on a case by case basis. In some cases an NGN infrastructure could require a higher initial outlay

than a traditional infrastructure and requiring NGN could represent an entry barrier in some cases.

The actual technology in use is transparent to the customer and would not influence broadband demand.

Introduction to IPV6

Referring to our earlier submission on the implementation of IPv6,[12] REACH considers that IPv6 will be driven by exhaustion of IP address resource, which is a global technical problem, and customer requirements, which is a commercial issue. REACH does not believe that regulatory measures are required to mandate IPv6 as market forces are sufficient.

Lawful interception of Internet Telephony

REACH would support law enforcement to the best of our ability but notes that interception of internet telephony is a complex topic and would suggest that expensive requirements for specialized equipment would be a barrier to entry.

Net Neutrality

TRAI has already issued recommendations to ensure that there is a certain minimum quality of service for customers. REACH supports the right of network operators to implement differentiated services to provide service quality in excess of these minimum standards for selected customers to improve return on investment.

Q7.	The service roll out obligations under ISP license is very general and can be misused by non-serious players. Do you feel the need to redefine roll out obligations so that growth of Internet can be boosted both in urban and rural areas? Give suggestions.

Although roll-out obligations serve an important social policy function, they are also a significant barrier to entry by increasing the capital outlay required. In a new market with services, the roll-

[12] REACH Limited Submission in Response to TRAI's Consultation Paper on Issues Relating to Transition from IPv4 to IPv6 in India, 23 September 2005.

out obligations also increase investment risk. REACH submits that the imposition of roll-out obligations on ISPs may be counter-productive to the development of a competitive ISP industry.

REACH also submits that requiring ISPs to cover a particular geographical area will be counter-productive to the development of niche market operators. Inhibiting the development of these niche operators will have a negative impact on Indian consumers, particularly those with specialist needs like those Indian companies providing Business Process Outsourcing.

Other jurisdictions – e.g. UK, Australia, Hong Kong – have not imposed rollout obligations on ISPs – and in spite of this, have fostered vibrant internet markets.

REACH further submits that promoting the developments of internet services in rural and lower income areas is a more complex problem than simply ensuring that network is available and ISPs exist to provide those services. Subscribers in those areas require:

(a) customer equipment to make use of the service (e.g. computer);

(b) training in the use of the customer equipment and internet applications available; and

(c) educational standards to make use of the information the internet service may provide.

REACH believes the better approach is to address the digital information needs of rural and lower income areas on a holistic basis with a clear focus on actual needs and current capabilities in those areas.

REACH submits that the social policy objectives in question are better addressed directly through existing universal access regulation rather than indirectly through licence conditions imposing roll-out obligations. This is particularly the case when universal access issues can be addressed on an industry-wide basis and across a range of services. REACH submits this better meets the needs of lower income and rural subscribers.

Q8.	Do you feel that ISPs who want to provide unrestricted Internet telephony and other value added services be permitted to migrate to UASL without spectrum charges? Will it boost Internet telephony in India? What should be the entry conditions? Give suggestions.

"*Spectrum is a valuable resource that is central to the operation of modern communication. Releasing more spectrum to the market will create new opportunities for innovation in wireless technologies, promoting competition and driving convergence*" – Ed Richards, Chief Executive of Ofcom, on launching proposals for the UK's largest spectrum auction on 11 December 2006.

Spectrum is a scarce resource and it is appropriate that those exploiting that resource pay appropriate public fees for its use.

REACH submits that ISPs migrating to UASL in order to provide unrestricted Internet telephony through the use of spectrum should be required to pay spectrum charges in keeping with those paid by other operators making use of the spectrum for unrestricted telephony services.

That said, REACH believes that many ISPs in India would prefer to acquire access to spectrum through resale by licensed operators (the ISP acting like an MVNO in this context). Such arrangements would facilitate the efficient use of spectrum resources and minimize investment barriers to entry for ISPs wishing to expand their range of customer services. For these reasons, REACH submits that the TRAI should recommend regulatory measures that require spectrum licensees to provide access at fair and reasonable prices.

Q9.	UASL/ CMTS licensees pay higher regulatory levies as compared to ISPs for provision of similar services. Do you feel that similar levies be imposed on ISPs also to maintain level playing field? Give suggestions.

REACH submits that it is not appropriate or necessary to create "regulatory equality" between different classes of licensees. This is discussed in more detail in response to Consultation Question 5. REACH submits that:

(a) the different regulatory levies imposed on different licensees appropriately reflect the different restrictions on the services (UASL operators are entitled to provide unrestricted internet telephony); and

(b) as set out in the TRAI's Consultation Paper, UASL operators have established their own affiliated ISPs to take advantage of the different regulatory regimes imposed on ISPs. For this reason the UASL operators are able to avoid any "unfairness" that may arise from the differential regulatory levies imposed.

Q10.	Virtually there is no license fee for ISPs at present. The amount of performance bank guarantee (PBG) and financial bank guarantee (FBG) submitted by ISPs is low. Do you feel the need to rationalize the license fee, PBG, FBG to regulate the Internet services?

REACH submits that increasing the licence fees, performance bank guarantees (PBG) or financial bank guarantee (FBG) would be counter-productive to the development of a vibrantly competitive internet services industry in India.

These charges create barriers to market entry so as to deter investment by new operators. Changes to these charges so soon after the 2005 licence regime review will undermine investor confidence in the stability of the regulatory environment in which investment decisions are made.

REACH acknowledges that reform of the PBG or FBG may be necessary in the future as the market develops. However, REACH believes that there are currently no compelling reasons for amending the quantum of guarantee required.

(a) It is inappropriate to use these guarantees as a barrier to entry to "ensure only serious players enter the Internet services sectors".[13] The PBG and FBG are not imposed for this purpose and their use as a barrier to entry is ultimately restrictive to the development of vibrant competition.

(b) Although the PBG and FBG perform an enforcement function, REACH submits the more significant penalty is the cancellation of the ISP licence. The PBG and FBG should reflect only the administrative costs of enforcement (and in the case of the FBG, the licence fees secured by the guarantee).

Q11.	At present ISPs are paying radio spectrum charges based on frequency, hops, link length etc. This methodology results in high cost to ISPs prohibiting use of spectrum for Internet services. Do you feel that there is a need to migrate to spectrum fee regime based on percentage of AGR earned from all the revenue streams? Give suggestions?

REACH submits that the ISP charges for radio spectrum should be oriented to the cost of the resources used. REACH does not believe this is currently the case at the present level of charging.

REACH believes that cost-oriented regulation of spectrum access fees is a more appropriate way of reducing the ISP fees than regulation based on AGR. In particular, REACH believes it creates inappropriate pricing distortions for spectrum fees to be calculated based on revenue earned on services which do not use spectrum. REACH submits that spectrum charges calculated in this way would lead to higher internet charges across the board and result in:

(a) internet subscribers who do not use spectrum to access the service unfairly subsidizing subscribers who do;

(b) congestion on available spectrum over time, as ISPs seek to move more subscribers onto wireless access technologies. Based on current technical constraints, this would lead to lower average internet speeds for subscribers as spectrum becomes more congested; and

[13] Consultation Paper, para 4.8.1.2

(c) lower internet penetration rates than would be the case if cost-oriented charging was introduced due to higher charges to subscribers across the board to subsidise wireless access.

Q12.	The consultation paper has discussed some strategic paths to boost Internet telephony, bring in level playing field vis a vis other operators, and regulate the Internet services. Do you agree with the approach? Please give your suggestion regarding future direction keeping in view the changing scenario.

REACH supports the general direction suggested in the Consultation Paper for the simplification of the licensing regime by the creation of a two tier regime for ISP operators:

(a) ISPs seeking to migrate to UASL for unrestricted IP telephony; and

(b) "plain ISPs" who do not provide unrestricted IP telephony.

The proposed widening of the scope of service for "plain ISPs" will not affect investor confidence as it essentially amalgamates the existing ISP licences into one category and will not contain additional restrictions not clear to investors at the time of investment. Similarly the creation of a "migrating ISP" category will not undermine investor confidence as it allows for business development and provides new opportunities for investors.

However, REACH notes that implementation of this two tiered licensing approach will require further consultation with the industry as the Consultation Paper does not contain clear proposals on a number of key issues, including:

(a) the criteria by which "plain ISPs" are distinguished from "migrating ISPs" (other than service scope);

(b) different licence fees and other regulatory obligations to be imposed on "migrating ISPs;

(c) the licensing procedures and detailed licence terms for each category of ISPs; and

(d) the procedure for the transfer of existing licensees to the new regime.

REACH believes that any implementation process must:

(a) minimize barriers to entry for "plain ISP" operators. Encouraging market entry at this level may lead to plain ISPs "climbing the ladder of investment" to the more closely regulated field of unrestricted IP telephony as their business develops. In particular, "plain ISPs" should:

    (i) continue to enjoy nominal licence fees for non-telephony services and be subject to a 6% AGR fee only for VoIP revenues;

    (ii) not be subject to spectrum fees calculated from AGR calculated from all services;

(b) maximize investment confidence in the stability of the regulatory regime. REACH submits that this requires:

    (i) no changes to the licence fee arrangements for "plain ISPs";

    (ii) no changes to the PSG or FBG submitted by "plain ISPs".

REACH submits that migrating ISPs may be subject to higher licence fees or increased guarantees without undermining investment certainty: migrating ISPs will be able to provide services currently prohibited to ISPs, and investment decisions in this new category of ISP services will be made with these restrictions in mind.