

# Telecom Policy Review Panel

## **Expert Evidence/Comments of Dr. Johannes Bauer on behalf of the Consumer Groups**

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### **Executive Summary**

#### A. The Changing Telecommunications Environment

##### Forces Shaping the Future

A.1 The most likely scenario is the emergence of a technologically differentiated and economically segmented environment. ICT will be organized around a standardized IP network platform, which will be more differentiated than envisioned by the original end-to-end architects of the Internet. Wireline and wireless broadband platforms will coexist with wireline and wireless narrowband platforms. Diffusion of these technologies will be uneven; some areas may continue to be dependent on narrowband and dial-up Internet service and not have broadband available without explicit public policy measures.

A.2 With the migration to digital technology, different networks will be capable of carrying a much broader range of applications than presently. Nevertheless, important functional differences, for example with regard to bandwidth, mobility, reliability, and security, will remain. Networks also differ with regard to their capital and operating expenditures. Consequently, different networks will be capable of supporting an overlapping but not identical range of services.

A.3 “One pipe, multiple applications” networks will increase in importance but it is uncertain whether they will be the primary means for the delivery of ICT applications and services to most Canadians within the next decade. The investment cost of upgrading to a ubiquitous broadband network, heterogeneous demand, and different functionality of network platforms will more likely result in an environment where one pipe multiple applications solutions will be adopted by many consumers but others will continue to utilize multiple, specialized platforms.

A.4 In most markets, a duopoly between cable and telephone companies seems to be a likely outcome. Other platforms, such as terrestrial wireless broadband networks and satellite-based networks may provide a third, not fully equivalent alternative platform to provide broadband Internet access in urban and suburban areas. In rural markets wireless broadband may be the only competitor to IP network services provided by the telephone companies or the cable companies. Some limited areas in which only one reasonable option is available may remain.

A.5 IP network platforms with high economies of scope and scale as well as business strategies that emphasize bundled service offerings constitute strong forces toward a concentrated market structure. Should a permissive policy framework be adopted, a duopoly with a competitive fringe is the most probable outcome. Should a more cautious approach prevail, more effective competition may be preserved in some market segments. The implications for regulation are twofold: (1) where regulation is presently in place, it is important to avoid premature or belated forbearance; (2) it is important to safeguard relatively open and non-discriminatory access to IP network platforms so that more robust competition can be established at the level of applications and services.

A.6 Inter-regional competition will probably intensify further for a while, with strong economic forces toward consolidation in the medium and long run.

A.7 In a one pipe, multiple applications environment, cable companies and ILECs are the two players with the strongest advantages and weakest disadvantages. Terrestrial wireless and satellite service providers will be strong players in one or two market segments but will face more significant hurdles in a fully integrated environment.

A.8 A significant part of the advanced ICT infrastructure will be financed via market transactions. However, given the public good aspects of advanced telecommunications infrastructure, additional measures will likely be needed to achieve a desirable level of connectivity and service diffusion. Funding sources and mechanisms should better reflect the distinction between network access and service. Connectivity would best be funded from the access component of services.

A.9 The transition to IP and other new technologies in the emerging advanced network environment requires the development of appropriate knowledge and skills, both in the work force and in consumers, to harness the benefits of these technologies.

A.10 Wireless technology holds great promise and will continue to be an important component of ubiquitous connectivity both within homes and businesses and outdoors. Technological change has been particularly rapid in license-exempt bands. It is critical that spectrum and other policies be adopted that facilitate continued experimentation and harness this innovation potential.

A.11 Public policy can help channel technological advanced in socially beneficial ways. One of the most important contributions of public policy is to assure that innovations can be developed and brought to the market. This implies securing reasonable openness in the emerging general-purpose network platforms. It also implies the creation and protection of open market entry conditions. Most importantly, it implies that public policy allow and facilitate institutional innovation and experimentation.

## B. The Regulatory Framework

### 2. Economic Regulation

B.3 The overarching role of regulation is to facilitate the pursuit of public interest goals. More specifically, economic regulation should (1) protect consumers from the abuse of market power; (2) safeguard competition in areas where workable competition does not prevail; (3) ascertain the benefits of ubiquitous availability of telecommunications services.

B.4 The two principles of economic regulation set out in the Telecommunications Act, namely “just and reasonable rates” and “no unjust discrimination”, continue to be appropriate. There is no need to change the language in the Act. Where increased pricing flexibility is in the mutual interest of consumer and suppliers, the Commission could develop approaches to allow a gradual modification of the historically established prices.

B.5 The present framework is generally appropriate to deal effectively with the tasks of economic regulation. Furthermore, the framework is sufficiently flexible to adapt the scope and intensity of economic regulation to pursue the public interest goals stated in the Act. Caution is required in the design and implementation of specific policies. Of central importance are (1) the delineation of workably competitive market segments, in particular resisting the temptation of premature forbearance with its negative consequences for the further evolution of competition; and (2) the development of principles that should govern network openness and access in a one pipe, multiple applications environment.

B.6 Rational telecommunications policy has to allow for the possibility that re-regulation might be necessary. If a market segment develops a high degree of concentration and/or substantially increased entry barriers, re-regulation may be appropriate. A decision should be based on an assessment as to the overall costs and benefits of renewed regulation. Competition analysis will play a strong role in such an assessment.

B.7 In principle, the present tools are capable of realizing the stated policy goals. They are used worldwide and considered state of the art to tackle the issues faced in telecommunications. However, the present implementation does not always measure up to best-practice and will need to be improved.

B.8 While the wholesale and the retail levels are related, an evaluation of whether to regulate wholesale services and underlying facilities has to be made independently of the retail market situation. The test is whether wholesale markets are workably competitive. If this is not the case, cost plus markup or possibly price cap regulation should be employed in addition to a specification of the rights and obligations of different service providers.

B.9 As mentioned in B.8, the conditions at the wholesale and retail levels are related but nevertheless require independent assessment. The presence of wholesale regulation may reduce the need for retail regulation somewhat but cannot fully substitute for it.

B.10 Ex ante regulation will continue to be the default choice under conditions of monopoly or dominance. Ex post forms of regulation have an increasing role to play if a market segment falls in the transition zone between classical regulated monopoly and workable competition. However, appropriate safeguards and bounds need to be in place.

B.11 The present challenges faced in the basic access network can be dealt with effectively in the framework of the existing contribution system. Should the market share of the ILECs decline, it will become increasingly unsustainable to place an obligation to serve solely on them. There are two principal options for this problem: (1) to expand an obligation to serve all customers in their service territory to all service providers; or (2) to define a more flexible system of universal service provision in which all carriers could participate. With regard to broadband access, the present targeted funding programs should be continued. Moreover, it would be timely for the CRTC to start a proceeding to study issues of broadband connectivity more closely and to develop a long-term model for increasing connectivity.

B.12 As industry structure changes, the requirement that ILECs serve any requesting customer on demand might have to be modified. Options include (1) expansion of an obligation to serve to all carriers; (2) establishment of a “provider of last resort status”, possibly awarded in a bidding process, with compensatory funding where necessary; or (3) introduction of individual subsidy schemes.