Introduction

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Communication: Neglected Priority of Communication Regulators

The telecom reform process is primarily about the implementation of some fundamental policy and institutional changes by national governments with respect to the future direction of the telecom sector. The essential change is from a government dictated monopoly provider of telecom infrastructure and services to a liberalized environment that allows, if not actually encourages, widespread participation in sector development and in convergence with related sectors such as computing, electronics and digital content. To facilitate this transition and guide its development, many National Regulatory Authorities (NRAs) have been established to address the many complex issues that arise in this highly dynamic and often unpredictable environment.

To date the research and policy debates have focused almost entirely on the substantive issues of policy and regulation, such as license conditions for new operators and standards for determining reasonable prices. There has been relatively little attention paid to the information and communication processes necessary to ensure that the new NRAs can perform their responsibilities efficiently and effectively. In most countries, few people other than those business and government officials directly involved in regulatory matters have any real knowledge about what the NRA does or why. Even fewer understand the implications of regulatory decisions. This limits access to information that is important to the business community, consumers, the public, and other government agencies, and restricts participation in regulatory inquiries, debates and decisions that affect the communication environment for everyone. As a new institution in most countries, and a reformed one in others, NRAs must establish responsive information and communication networks with their constituents and the general public if they wish to be effective. But the communication effectiveness of communication regulators has rarely been attended to. It has never been a priority and is often not even acknowledged or recognized.

The pace of telecom reform has varied widely among countries depending heavily on local circumstances and political priorities, including the prior state of general economic development and telecom sector development specifically, and the extent of near-term potential benefits from specific reforms. The telecom reform process began in the US more than a quarter century ago and some countries have yet to start. Although developed countries generally have been the early reformers and developing countries the later ones, this is by no means a precise distinction as there are overlaps, as well as large differences among countries within these general classifications in the timing, speed and priorities of reform.

These significant differences have led to the adoption of a variety of benchmark indicators to measure and compare progress with reforms, to identify best (and worst) practices, and to stimulate greater progress with reforms. These indicators have focused on the extent of achievement of particular steps in the reform process, e.g., interconnection and consumer prices, extent of access to particular services, extent of competition in providing particular services, etc.. The International Telecommunications Union (ITU) publishes statistics on a number of common indicators for most UN member countries, but the quality of the reported data can vary widely. The Organisation for Economic Co-operation and Development (OECD) publishes a more comprehensive and reliable set of indicators with higher quality data, but coverage is normally limited to OECD member countries. The European Commission has used a series of telecom reform indicators to

identify leading countries and best practices on specific reforms, and used this evidence to actively encourage laggard countries to improve their performance. Special interest groups, regional associations and individual countries often develop their own sets of benchmark indicators. In addition, within the broader context of ICT convergence and information society development, a variety of indicators of "e-readiness" and information society development have been adopted. But none of these programs for measuring benchmark indicators includes an indicator to measure the communication effectiveness of national NRAs in implementing the reforms necessary to achieve e-readiness and information society goals.

Evolution of NRA Website Benchmarking

LIRNE.NET has been providing training courses for executives and senior staff of NRAs, and other participants in the regulatory process, for more than a decade. These courses include the use of benchmarks in key areas of substantive regulation, and the encouragement of NRAs to develop their own set of benchmark indicators and comparison countries as a guide to improving their performance over time. Although we encouraged NRAs to pay attention to the importance of information sharing and effective communication with their constituent groups and the public, we focused predominately on the substantive issues that must be addressed by regulation.

As the Internet grew rapidly during this period and websites became common, Amy Mahan suggested that benchmarking NRA websites might provide some good indicators of the effectiveness of NRAs in providing essential information and in communication with their constituents and the public, and thereby the quality of their services. As the regulator of telecom networks and services, NRAs should be making active use of them in providing their own services. Early efforts at benchmarking NRA websites in Europe were restricted by the diversity of languages and constrained by limited data and experience. But they provided useful teaching tools for the training courses, and were used by the Danish and Dutch regulators in assessing their respective performance. As the Internet continued to grow, Amy turned her attention to developing countries where it seemed NRA websites could not only facilitate telecom reforms, but also provide a leading soource of best practices and demonstrate the wider potential of e-govern-

Amy's initial regional benchmarking study of selected African NRA websites was first used in a LIRNE.NET training course on telecom reform held at the University of Witwatersrand in Johannesburg. After the session examining the study and discussing its implications, some course participants from the NRAs of countries that didn't rank too well claimed the study was full of errors and could not be relied upon. At the lunch break we invited them to access their websites, and call their website managers to identify where the study was wrong.

They reported back that they had not realized how unresponsive their websites were, and improvements would be made immediately.

Building on this early experience and the continued growth of the Internet and the potential capabilities of NRA websites, Amy has been able to improve the methodology, the data and the quality of the benchmark comparisons in next stage studies that she and colleagues have done covering different regions of the world. The present publication is the most comprehensive set of studies done to date.

Moving Closer to Global Benchmarking Indicators

This is the first NRA Website Benchmarking report that provides results from a near-global coverage for the same time period. Studies cover Latin America, the Caribbean and North America, Africa and the Asia Pacific region. Doing the studies was not a straightforward exercise. They identify the enormous differences among countries. For example, at the time of data collection, in Africa 45% of the countries surveyed didn't have NRA websites, and in Asia 29%. Some countries did not have regulators. In others, some regulatory activities were being performed, but dispersed through different government agencies rather than established in an NRA. These study results demonstrate very clearly the interdependent "chicken and egg" nature of network development. An Internet presence doesn't mean much unless others have an Internet presence. The value of an NRA website depends on access to the Internet, not only by the NRA but also by the network of constituent interests that it needs to serve. Yet the pace of growth of Internet access is influenced by policy and regulation facilitating telecom infrastructure and services development and ICT convergence. Far too many countries are still struggling to establish the foundation conditions for Internet access where the benefits of network growth exceed the costs.

In Chapter 2, *Benchmarking Assessment Methodology*, Hugo Carrion and Amy Mahan review the methodology of the studies which has been refined and strengthened based on Amy's experience with her earlier research. Three of the four regional studies were able to follow the same methodology for measuring the indicators, with the fourth (Asia-Pacific) adopting a parallel approach adapted to the particular circumstances of the countries being studied. This increases the possibilities for drawing meaningful comparisons across countries and regions.

The studies are not designed simply to fulfill the limited objective of identifying leading and following countries, but rather to identify specific best practices, which are likely to vary among countries. Country ranking is done, as that is what gets their attention, but then the studies identify where specific strengths and weaknesses are and specific improvements warranted. The studies adopt a classification scheme for assessing website performance that identifies four stages of

website development - emerging, enhanced, interactive and transactional. Benchmark indicators are developed for five major categories and 20 subcategories of website activity which individually and collectively measure performance.

In Chapter 3, *Benchmarking National Regulatory Authority Websites in Latin America*, Hugo Carrion shows the significant diversity among the 21 countries examined by identifying the different stages of telecom reform in the different countries, and the significant differences in the ages and roles of the NRAs. Specific areas of strength and weakness are identified. Although Latin American NRA website development is still in the "emerging" category, the study also was able to document some improvements over time.

Opal Lawton provides an interesting contrast between early and late telecom reform countries, as well as rich and poor countries, in Chapter 4, *Benchmarking of Caribbean and North American NRA Websites*. Although the US and Canadian NRA websites are more advanced, as expected given their circumstances, they did not have the best practice in all categories. The study shows that even the North American NRA websites haven't reached the advanced transactional stage of website development yet. Among the 12 countries, some had multiple agencies performing different functions, making indicator measurement more difficult.

In Benchmark Indicators for African NRA Websites, Chapter 5, Monica Kerretts-Makau identifies a very wide diversity among countries. Only 30 of 54 countries had NRAs with websites. Although most countries were still at an early stage in the telecom reform process and in NRA development generally, some countries scored well on specific indicators. In most countries, the limited development of the Internet, and NRA websites, suggests that the web is not the main means of communication access to or by NRAs. Local languages are extremely important in some countries and the populations more difficult and costly to serve as they require more advanced Internet development. NRA website development in most countries is often linked to developments in e-government generally and e-governance in particular. Thus at this early stage of development, NRA website development for most African countries is a much more limited indicator of progress in implementing telecom reforms.

In Chapter 6, *Benchmarking Asia Pacific NTRA Websites*, Lara Alawattegama and Chanuka Wattegama examined the widest diversity among counties ranging from the very poor and underdeveloped to the very rich and highly developed. Many of the same difficulties that were identified in the African study were found here as only 31 of 62 countries had NRAs with websites that had a version in English, which was necessary to be included in the study. Thus a few important countries, including China and South Korea, had to be dropped from the study. Given the greater extent of diversity among

countries, this study clustered the countries in groups as measured by access paths/100 population to facilitate proximate benchmark comparisons. In addition, the primary focus was shifted to regulatory functions rather than NRAs, as a number of countries performed a number of regulatory functions but not through an NRA.

The studies have done a good job at showing the interrelations between NRA website development and telecom network development by placing the research within the context of overall telecom reform and ICT development. Their recommendations for improvement in responding to best practices are especially significant as weakness on some individual indicators can significantly weaken the overall effectiveness of the website for NRA communication with its constituents.

Although the regional studies were all done by applying a consistent methodology and covering the same time period, they were done by different researchers, each with specialized knowledge of their regions. But they wisely did not try to compare the basis of their professional judgments across the regions. Thus, the numerical scores are not comparable across regions. However the detailed assessments of specific strengths and weaknesses as shown by particular indicators are generally comparable. For example, the common conclusion that the studies document that no country has an NRA website that has reached the transactional stage of development yet is fully demonstrated by the data and the assessments from each region.

After reviewing these studies in the context of Internet development generally, it seems fair to observe that the results show NRAs have not been leaders in the use of websites for fulfilling their mandates. They have not provided best practice examples in promoting their mission of stimulating Internet development. There is considerable room for improvement as telecom reform and Internet development continue. Although the speed of Internet growth rapidly dates the specific data measurements used in these studies, it does not render obsolete the best practice assessments, conclusions and recommendations.

An interactive and transactional Internet presence is rapidly becoming essential for all organizations as the major instrument for effective information gathering and communication. For the future, the Internet makes possible major improvements in the international networking of NRAs among themselves as part of a learning process of identifying and employing best practices in all areas of regulation, not just website development. This report provides an important step in preparing for this possibility. It provides a foundation for continuing research on these issues as telecom reform proceeds, NRA websites improve, and NRAs begin to make effective use of the next-generation Internet in fulfilling their mission.