





## Research

Research, spanning multiple cycles and countries, have provided raw material for our policy work. Short descriptions and a few key learnings from each are highlighted. More information is on our website.

## Teleuse at the bottom of the pyramid 3 (Teleuse@BOP3)

Much of the growth of the last billions of mobile connections has been attributed to emerging markets, particularly those in India, China and other Asian countries. Given that Asia is, unhappily, still home to the largest number of poor people, it may be inferred that

**Table 5:** Key survey findings from Teleuse@BOP3 (2009)

	Bangladesh	Pakistan	India	Sri Lanka	Philippines	Thailand
<b>Primary access mode (% of BOP teleusers)</b>						
Mobile phone	43	37	34	30	61	74
Fixed phone (household)	0	3	6	41	0	7
Public phone	32	8	33	7	4	3
Other people's phone (neighbor, relative, etc)	26	52	27	23	35	16
<b>Ownership (% of BOP households)</b>						
Mobile phone	40	34	31	19	50	65
Fixed phone (household)	0	2	4	33	0	1
Both	1	3	3	12	0	5
<b>Mobile phone use (% of BOP mobile owners)</b>						
Prepaid	99	99	98	95	100	98
Postpaid	1	1	2	5	0	2
SMS use	32	47	33	52	100	53
Missed call use	94	84	84	73	86	39
<b>Mobile expenditure (USD)</b>						
Average price paid for handset	54	37	46	57	47	86
Average last prepaid top-up	0.50	0.85	1.65	0.94	0.64	2.49
<b>Multiple SIM ownership (% of BOP mobile owners)</b>						
Own more than 1 active SIM card	10	23	9	16	19	13
<b>Internet awareness and use (% of BOP teleusers)</b>						
Awareness	44	43	37	77	90	80
Use	1	2	1	3	21	23
<b>Mobile 2.0<sup>1</sup> awareness and use (% of BOP mobile owners)</b>						
Awareness	22	30	19	80	68	60
Use	2	9	5	19	13	23

<sup>1</sup> Includes awareness or use of any of the following services accessed through a mobile: banking and financial; payment; government; health; voting/polling; general information; agricultural and fisheries information.

many of these new subscribers in Asia have come from the bottom of the pyramid, or the BOP. Innovations in technology, business models and policy are required to serve the BOP efficiently. Therefore, good insight into the growing demand for telecom services at the BOP is important.

Teleuse at the bottom of the pyramid, or Teleuse@BOP, pioneered by LIRNEasia in 2005, is a series of cutting-edge, demand-side studies of ICT use among the BOP. It was the first large-sample study to assess demand for ICT services among emerging Asia's BOP.

Over the past five years, LIRNEasia has built a profile in demand-side telecom research. The findings have proved useful in helping governments understand the significance of telecom, especially the mobile. They have contributed to debates on universal service policies, on taxation and even on the registration of phones for security purposes. The wide media attention received in multiple countries and in multiple languages points to the relevance of, and need for, such research.

Teleuse@BOP3 involved a detailed survey of 9,750, representative of the BOP in India, Pakistan, Bangladesh, Sri Lanka, the Philippines and Thailand, as well as focus group discussions, mini-ethnographies and home visits among more than 200 subjects in the six countries in early 2009. Additional surveys of migrant workers in the six countries were conducted to understand the potential for mobile remittance and other services.

The premise of much of LIRNEasia's research in the 2008-10 cycle was that the mobile will be the primary device through which the BOP in emerging markets will engage with the Internet, for tasks such as information retrieval, payments and remote computing. It appears that many others are coming around to our thinking. Teleuse@BOP3 has provided LIRNEasia with hard evidence that this is the case; its findings have formed the basis of many contributions to this new discourse, most significantly through a background paper presented by Rohan Samarajiva at a joint OECD/World Bank workshop on policy coherence in ICT for Development in September 2009 (see p. 67). We have seen great progress in telecom access and ownership across countries since 2006; the access challenge at the BOP has been met. Although the use of services beyond voice (or Mobile 2.0 services) has been poor, encouraging levels of awareness have been seen, especially in countries with higher penetration levels, indicating that as penetration grows, awareness is likely to grow.

The research has also fed into work such as understanding of the "budget telecom" network business model that has enabled impressive gains in voice connectivity as well as the beginnings of more-than-voice applications over mobiles. Drawing from findings of the quality of service experience (QoSE) research, LIRNE has extended the argument to broadband connectivity also.

*Research Manager: Ayesha Zainudeen*



## Agricultural information and markets (AgInfo)

Since 2002, before the creation of LIRNEasia, some of our researchers were trying to understand how to make agricultural markets more efficient. Part of that work culminated recently in the launch of TradeNet, a mobile phone-based service which allows farmers to receive price alerts from three agricultural wholesale markets in Sri Lanka. The service is provided by Dialog Axiata PLC, the largest mobile operator in Sri Lanka (see p. 48). The prices are provided by Govi Gnana Seva (GGS), a non-profit organization (founded by Harsha de Silva and managed by Sriganesh Lokanathan), which is then disseminated via Dialog's TradeNet platform. To coincide with the countrywide launch of this service, LIRNEasia has initiated studies to understand the likely impacts of such services on farmers' livelihoods, as well as to articulate and implement some of the longer-term steps needed to bring down price volatility of agricultural markets of Sri Lanka. The research has been funded by the International Development Research Centre of Canada and USAID (via their CORE program).

While research is still ongoing, we have already begun to collate some important findings. A 700-sample survey helped us ascertain users' willingness to pay for agricultural information through mobile phones. The survey also confirmed the hypothesis that farmers place a high degree of value in being able to reach buyers directly. The TradeNet platform enables matching buy orders (from traders) with sell orders (from farmers). The next challenge is ensuring that price collection systems and hence, GGS, remains effective and sustainable in the long term.

During the 2006-07 research cycle, LIRNEasia research quantified the high information search costs incurred by farmers across different stages of the crop cycle, from deciding which crops to grow to actual harvesting. Current research is examining how such information costs can be brought down through improved access to market price information via mobiles; farmers using the service are already showing positive results. This is exemplified by the story of Dissanayake, a farmer with a one-acre plot in the village of Kaloga-haela in Matale, Central Sri Lanka. During the last harvest period in May 2010, he received an SMS alert informing him that cabbages were selling at LKR 25 per kilogram, at the Dambulla Dedicated Economic Centre, the largest wholesale agricultural market in the country. Not satisfied, he decided to wait. That afternoon, he received another alert informing him that prices had risen by 40 percent to LKR 35 per kilogram. Eager to cash in on the opportunity, he harvested his crop, and sold it at the market that evening at LKR 45 per kilogram, a staggering 80 percent above the morning price.



Our research is also showing how farmers are increasingly responding to price-based signals in deciding what crops to grow next. Such findings are in line with LIRNEasia's objective of going beyond the passive use of ICTs (agInfo) to active use by farmers in making market-based decisions that lead to improved livelihoods (agStrategy).

Our research recognizes the importance of legal and institutional frameworks. Improved livelihoods for poor farmers can be realized only through market-based activities where supply matches demand continuously; through spot and forward markets depending on the type of produce and, in the ideal case, even futures exchanges. Realizing this long-term vision requires several intermediate steps. Commodity-backed financing, for example, can enable farmers to ride out periods of oversupply in the market. Backed with research conducted in India, we are working on bringing together multiple stakeholders to formulate solutions for Sri Lanka. Starting with the launch of TradeNet, LIRNEasia's evidence-based research is now facilitating multi-stakeholder initiatives among both the private and public sector in improving livelihoods.

*Project Director: Harsha de Silva  
Research Manager: Sriganesh Lokanathan*

### The launch of GGS-Dialog TradeNet agri-price information service



**The launch of Dialog TradeNet.** From left: Rohan Samarajiva; Harsha de Silva, Founding Director, GGS; Hon. Bandula Gunawardena, Minister of Trade, Marketing Development and Consumer Affairs; Hans Wijayasuriya, Director and Group Chief Executive, Dialog Axiata PLC

*Photo courtesy of Sameera Wijerath*

In 2002, even before LIRNEasia existed, Harsha de Silva and Sriganesh Lokanathan began trying to understand ways in which operational efficiencies of agricultural markets could be increased. Building relationships with farmers, traders and buyers, Govi Gnana Seva (GGS) or the Farmer Knowledge Service was started in 2003, initially as a pilot funded under the e-Sri Lanka initiative, to collect and disseminate wholesale agricultural prices, with the aim of reducing information asymmetry in agricultural markets. On 23 December 2009, GGS was launched nationwide as a part of Dialog TradeNet, a trading platform launched by Dialog Axiata PLC, Sri Lanka's largest mobile service provider. The trading platform and market price alerts are accessible via multiple technologies including WAP, web, SMS, voice and USSD. The platform is specifically designed to facilitate information flows and trading via the mobile phone.

### LIRNEasia's Consultant Lead Economist appointed to scientific advisory committee of eARN Africa



LIRNEasia's Consultant Lead Economist, Harsha de Silva, was one of five people appointed to the Scientific Advisory Committee of a two-year multi-country African research project, "eAgriculture Network for Africa (eARN Africa): Effectiveness of Electronic-Based Interventions in Linking African Farmers to Markets". The project, which commenced in March 2009, aims to study the efficacy of ICT-based interventions in African agriculture with findings to be fed into African governments and stakeholders. The countries are Kenya, Malawi, Uganda, Ghana, Benin and Madagascar. The project is funded by the International Development Research Centre (IDRC) of Canada.

Harsha leads agriculture-focused research at LIRNEasia, including a study on the impact of ICTs on transaction costs in agricultural markets. The findings of his research with LIRNEasia have been incorporated in Sri Lanka's first mobile trading platform by Dialog Axiata, the country's largest mobile service provider.

## Measuring ICT sector and regulatory performance: Indicators 2009-10

How do we know telecom sector reforms are working? This is one of the key questions LIRNEasia has grappled with from the start. One could simply measure sector outputs and see if the performance is satisfactory (in comparison to peers, perhaps), because regulators and policy-makers often get credit (or blame) for good sector performance. Or one could evaluate regulatory and policy actions alone, irrespective of sector performance. We recognize the value of both approaches and, hence, have continued our research on both in the past year.

### Measures of ICT sector performance

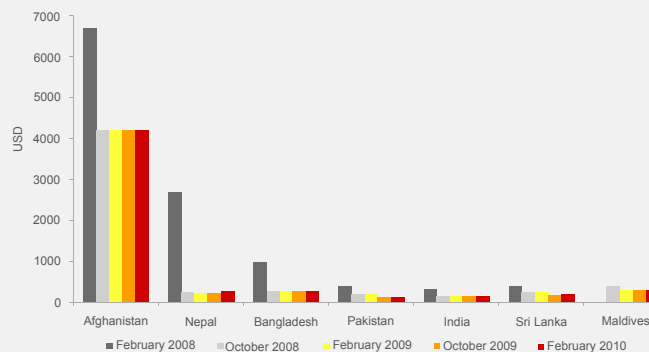
One way of assessing whether the goals of reforms have been achieved is by measuring sector outputs. That is, to examine if connectivity is increasing, prices are decreasing, choice is increasing and quality is improving. Twice a year, in February and October, we publish online the results of our benchmarking research: a broadband benchmarks report (comparing wholesale and retail broadband prices as well as quality of service experience [QoSE] measures) and a mobile benchmarks report (comparing retail mobile prices, using a modified version of OECD methodology). These data are useful in making evidence-based interventions in policy and regulatory processes. They also provide regulators and policymakers with timely, accurate and comparable data.

**Mobile benchmarks:** Given the role played by mobile phones in getting the masses in the Asia-Pacific connected electronically, we continued to report the average monthly cost of using mobile phones. The methodology, originally developed by the OECD, was modified for Asian markets. Separate baskets were calculated for prepaid and postpaid users. Our 2009 and 2010 mobile benchmarking across eight SAARC countries (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka) revealed that Pakistan had overtaken Bangladesh as the country with the cheapest monthly prepaid mobile low-user basket. Among the East and Southeast Asian countries, Mongolia, which was included in the study from October 2009, recorded the lowest monthly prepaid costs for low users, followed by Thailand, Indonesia, Malaysia, the Philippines and Singapore in February 2010.

We continued to publish and advocate such tariff indicators, as opposed to simpler measures such as the per-minute prices then used by the ITU [International Telecommunications Union]. However in the first quarter of 2009, we were delighted to see the ITU adopting the OECD methodology. LIRNEasia will no longer calculate or report mobile basket data.

**Broadband price benchmarks:** Although innovative business models are fast closing the voice connectivity gap, broadband connectivity in our

part of the world continues to lag behind developed countries. Affordability of the big pipes (wholesale connectivity costs) has been identified as a key reason. In addition to wholesale prices, LIRNEasia continued to benchmark fixed and mobile broadband retail prices as well. Time series data show that, with the exception of Afghanistan (a market with unique investment risks), retail prices in nearly all other countries we study have begun to converge (Figure 14).

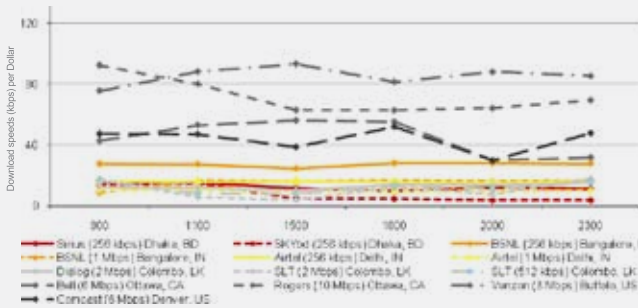


**Figure 14:** Annual cost, 256kbps broadband residential connection (unlimited download)

**Broadband quality of service [QoSE] benchmarks:** In collaboration with the Indian Institute of Technology (IIT), Madras, LIRNEasia has developed a cutting-edge methodology to measure broadband quality of service experience. The methodology measures both traditional indicators of quality (upload and download speeds) as well as indicators such as jitter, packet loss and round-trip time. Each indicator is measured in relation to a server within the ISP, a server within the same country and a server located within the Internet cloud. Instead of relying on operators and/or regulators to measure and report broadband quality from central locations, the methodology measures quality at various times of the day as experienced by users; data are automatically uploaded to a publicly-accessible website. The software is freely downloadable from <http://www.broadbandasia.info/>.

In October 2009, the quality of service experience of selected fixed broadband packages in two developed countries, Canada and the USA, was compared with that of selected cities in Bangladesh, India and Sri Lanka. The packages tested were Bell/6 Mbps and Rogers/10 Mbps from Ottawa Canada, Verizon/3 Mbps from Buffalo, USA, and Comcast/6 Mbps from Denver, USA. The comparison was also carried out on delivery versus promised speeds and on delivered value for money (kbps per US Dollar).

The comparison indicated that users from Bangladesh, India and Sri Lanka receive less value for money than their counterparts in North America (Figure 15).



**Figure 15:** Broadband download speeds per US Dollar (kbps/USD) in selected cities when accessing an international server, October 2009

Below are some other findings:

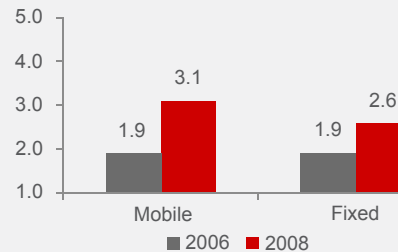
- Indian operators are best at delivering what has been advertised: Although they only advertised at minimum speeds (256 kbps or 512 kbps are common entry-level speeds advertised in most Indian cities), almost all tested packages were found to deliver them. In fact, some operators delivered more than was promised.
- Quality of fixed broadband packages in Sri Lanka and India have improved: For example, tests in February 2008 showed users only experiencing speeds of 20-25 percent of what was promised when accessing international sites. A year later, at least one package in each country had achieved a performance rate of approximately 40 percent during peak hours, and 60 percent at off-peak; other packages were not far behind. This shows that while international bandwidth issues remain, some remedial action has been taken.
- Latency of many, but not all, fixed broadband operators in Bangladesh, India and Sri Lanka is now approaching IDA [Infocomm Development Authority of Singapore]-specified levels. IDA standards were the only benchmarks for latency but TRAI [Telecom Regulatory Authority of India] has since adopted its own. Results for February 2009 show that most operators in the three countries now perform closer to 300 milliseconds (ms), the Singaporean regulator standard. A correlation between price and QoS changes was observed in Bangladesh.
- Overall quality of HSPA [High Speed Packet Access] in Sri Lanka has improved. Mobile broadband packages of two operators in Sri Lanka were formally tested in September 2008. While download speeds were better than with fixed packages, there was still room for improvement. However, in the next round of testing in February 2009, an improvement in quality was observed on the other parameters. Both mobile broadband operators did better in delivering what had been advertised than their fixed counterparts.

Measures of ICT regulatory performance

LIRNEasia's TRE [Telecom Policy & Regulatory Environment] survey measures regulatory performance directly.

The Telecom Policy and Regulatory Environment (TRE) is a perception-based survey across seven dimensions: market entry, allocation of scarce resources, interconnection, regulation of anti-competitive practices, universal service obligation, tariff regulation and quality of service regulation. Fixed, mobile and broadband sectors were studied. Over 300 telecom experts, ranging from operators and private investment houses to research institutions and the media, were interviewed in Afghanistan, Bangladesh, India, Indonesia, Maldives, Pakistan, the Philippines, Sri Lanka and Thailand. A select group of senior stakeholders from three different categories (those directly involved in the sector such as operators and equipment vendors; those indirectly involved in the sector with broader interest such as consultants and lawyers; and those who represent broader public interest groups such as media personnel, other government officials, retired regulators and civil society organizations) were surveyed.

Since we had conducted TRE surveys in many of these countries earlier, we were able to see TRE scores tracking changes in policy and regulation; Indian TRE scores for universal service obligation (USO) are the best example. When we conducted the TRE survey in 2006, India's USO score was the lowest among the countries studied and also the lowest dimension within India itself. At that time, India's USO policy channeled funds levied from mobile operators to the incumbent (government-owned) fixed operator. However, rural areas were, in fact, being served by mobile operators. In March 2007, the Indian policymaker changed the rules, making mobile operators eligible for USO funds. TRE scores for India increased by 64 percent, the largest increase in a TRE score we had ever seen (Figure 16).



**Figure 16:** TRE scores for universal service obligation (USO) in India (2006 vs 2008)

Research Manager: Helani Galpaya

### Mobile 2.0 at the bottom of the pyramid (Mobile 2.0@BOP)

Mobile 2.0 describes the second wave of mobile phone use for “more-than-voice”. Mobiles can send/receive voice, text and images; they can be used as organizers, for making payments and even as radios; many relatively low-cost mobiles can now also access the Web. It is envisaged that in the next few years, most handsets will be capable of all functions associated with the Internet, including information-retrieval and publishing.

Arguing that the dominant “fat pipe” (coaxial cable, fiber coming into each household carrying voice, data and entertainment) narrative had little applicability to emerging Asia, LIRNEasia postulated Mobile 2.0 as an alternative narrative. Due to the significantly higher cost of providing Internet facilities over personal computers (PCs) to the BOP in emerging Asia, it is likely that the majority will tread a wireless-network path to the Internet.

LIRNEasia’s research in 2008-10 interrogated this thesis exploring services such as mobile payments and remittances, agricultural applications, disaster-warning applications and e-government services. In addition, fundamental policy and regulatory issues affecting this path were also explored.

Although Mobile 2.0 is still inchoate, our research reveals signs of things to come. LIRNEasia’s six-country survey of Teleuse@BOP found low levels of awareness, but these levels differed by age group, indicating that the younger cohort was primed to move to use from awareness.

CellBazaar, a popular mobile-based electronic marketplace available to Grameenphone customers in Bangladesh allows buyers and sellers to find each other over mobiles. The service offers only search and a basic feedback mechanism at present (Figure 17), but it can be used via SMS, WAP and voice (interactive voice response [IVR]), as well as the Web.

Blue-collar workers in multiple countries use mobile phones to participate in the online social networking service MyGamma offered by BuzzCity. In India, numerous ICT interventions (e-Choupal, m-Krishi, etc.) have been initiated to reduce information asymmetries and provide alternative markets and exchanges for farmers. A system developed by the Zero Mass Foundation (ZMF) has taken mobile payments services to the BOP. Studies also documented the preconditions for effective use of mobiles for public warning regarding rapid-onset disasters and mobile-based payments for public transport services.

Findings from the policy/regulatory component showed the need for market-based allocation and pricing of frequencies for mobile telephony and data services. There was little support for the implementation of mobile number portability in any of the countries studied, if looked at from the perspective of the BOP.

*Research Manager: Chanuka Wattegama*

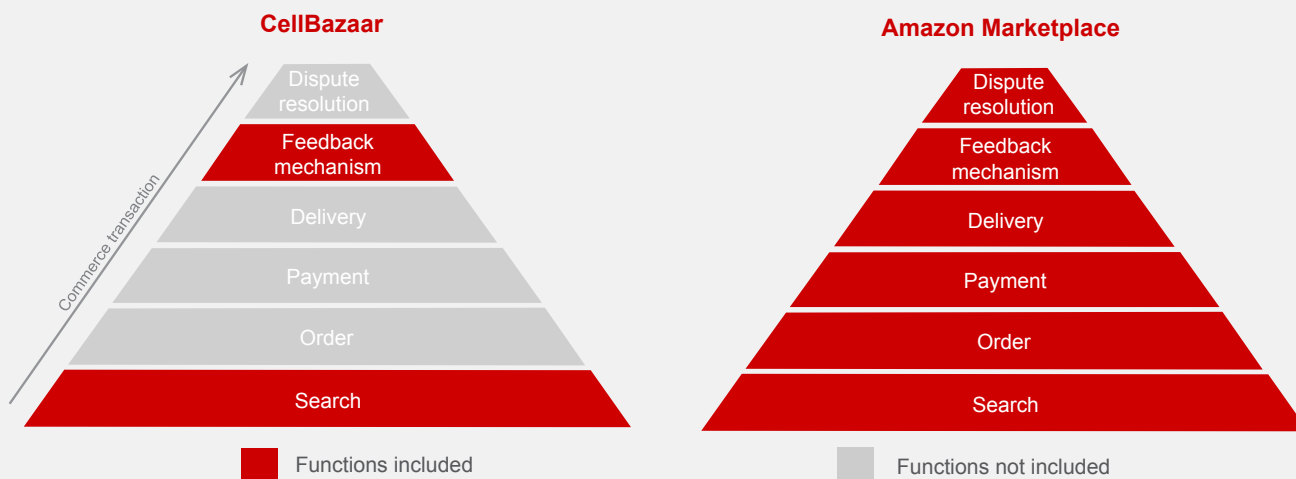


Figure 17: Comparison of e-commerce functionalities by CellBazaar and Amazon Marketplace

## Knowledge to innovation (K2I)

Soft infrastructures such as education, training and knowledge networks are just as important for society as hard infrastructures such as telecommunication and roads. The knowledge to innovation (K2I) project represents the soft-infrastructure side of LIRNEasia.

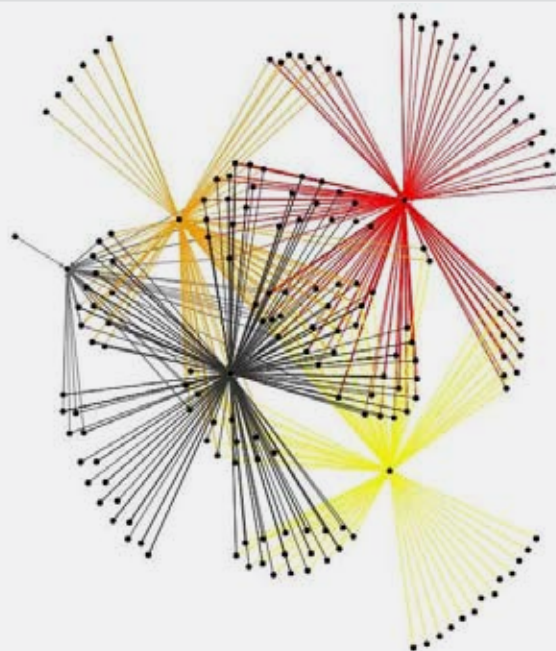
LIRNEasia's K2I work has matured from an exploratory project to a fully-fledged research program in developing education, training and knowledge networks to address several intractable problems in Sri Lankan society. The K2I program is based on the premises that (a) connecting pockets of knowledge through communities of practice is as important as creating new knowledge, and (b) knowledge created in the workplace (also known as mode-2 knowledge) is central to service innovation (with mode-1 knowledge producers such as universities and research institutes playing a supporting role). The current focus is on solid-waste (SW) services among local government authorities (LGAs) in Sri Lanka. To date, the project team has tested several tools for knowledge-sharing among stakeholders. Attempts to apply the tools in partnership with provincial and local authorities are ongoing.

In 2008-09, we examined whether connectedness among individual and organizational stakeholders in SW services would lead to better performance and what lessons, if any, could be generalized to other local government services. This included the use of ICTs.

There are 331 LGAs in Sri Lanka's nine provinces. Between October 2009 and January 2010, the study surveyed SW managers in 217 LGAs in six provinces on whether they sought external knowledge inputs. The responses yielded a measure of connectedness. The knowledge-seeking activities of LGAs (Figure 18) indicate that from among a total of 634 knowledge-seeking interactions, 36 percent are with the central government (dark grey); 27 percent with other local authorities (red), 15 percent with provincial governments (yellow), 6 percent with universities (light grey) and 17 percent with other sources (orange).

We also asked SW managers about their "success" in managing waste. The existence of a functioning site-separation program or a program to systematically manage the waste after collection was used as the measure of success. All successful LGAs showed some level of connectedness but those connected to peers or other non-governmental sources were more successful than those connected primarily to government sources. Research is currently underway to develop tools to prod unsuccessful LGAs into action.

*Project Director: Sujata Gamage*



**Figure 18:** Solid-waste-related knowledge-seeking links between local authorities in Sri Lanka and the central government (dark grey), provincial governments (yellow), other local authorities (red), universities (light grey) and other organizations (orange) in 2009

## Real-time bio-surveillance program: A pilot project (RTBP)

The research question that the real-time bio-surveillance program (RTBP) seeks to answer, within the context of studying its human, technology and policy implications, is “can software programs that analyze health statistics and mobile phone applications that collect and report health information be effective in the early detection, intervention and prevention of disease outbreaks?”

Conventional paper-based notification systems have not proven effective in providing the much-needed near-real-time detection for containing disease outbreaks before it takes lives. RTBP has introduced a mobile phone application for collecting clinical information, real-time detection of adverse events with spatiotemporal statistical analyses tools, and standardized alerting to improve situational awareness in providing epidemiology units with the means of responding to disease outbreaks before they reach the tipping point.

Nurses in the Sivaganga District in the state of Tamil Nadu, India, and Sarvodaya Suwadana Center primary health workers in the Kurunegala District, Sri Lanka, were given mobile handsets, costing around USD 100 each, equipped with the RTBP-developed mHealth-Survey java software applications for submitting patient records. The district health officials use the T-Cube web interface anomaly detection software to identify statistical patterns indicating adverse events. Upon discovering any events of interest, the health officials use SMS, email and Web technologies to notify respective health workers of imminent health threats (Figure 19).

The current existing systems, the India Integrated Disease Surveillance Program (IN-IDSP) and the Sri Lanka Disease Surveillance and Notification System (LK-DSNS), which are confined to monitoring 25 diseases, allocate the majority of resources to data collection with little or no emphasis given to event detection and alerting. In contrast, RTBP’s m-health solutions for India (IN-RTBP) and Sri Lanka (LK-RTBP) reduce such costs (Figure 20), while also introducing a more comprehensive, disease and syndrome monitoring and mitigation system.

Partners include the Ministry of Health and Nutrition, Wayamba Province, Sri Lanka, the Department of Health and Family Welfare, Tamil Nadu, India, the Indian Institute of Technology (IIT), Madras’s Rural Technology and Business Incubator, the National Centre for Biological Sciences, India, the Sarvodaya Shramadana Movement, Sri Lanka, Carnegie Mellon University’s Auton Lab, the University of Alberta, Canada and Respere Lanka (Private) Limited, Sri Lanka.

*Project Director: Nuwan Waidyanatha*

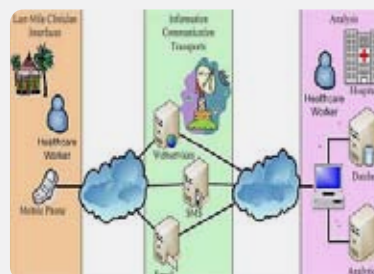


Figure 19: M-health wireless communications system architecture

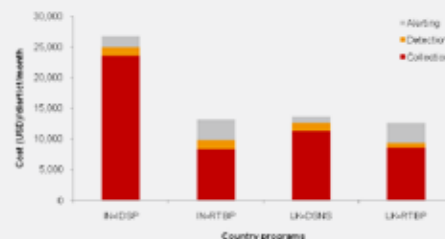


Figure 20: Costs of present disease surveillance programs vs. real-time bio-surveillance programs in India and Sri Lanka

### HazInfo to m-health: Early warning research and development continues



Figure 21: Data collection, event detection, and alerting process flow

LIRNEasia’s long-term research and development on Common Alerting Protocol (CAP) all-hazards all-media content standard for emergency communications, which started with the HazInfo project, is being advanced for m-health. The m-health project enhanced the Sahana Messaging module (first built as part of the HazInfo project) in to a CAP-based messaging broker. This is now being tested in India and Sri Lanka.

The Sahana Messaging / Alerting Module (SMAM) is being used to disseminate information on adverse events to healthcare workers’ mobile phones for immediate response. In addition to the substantial gains in operational efficiencies, the m-health project, because it allows access to a richer and more comprehensive dataset, can improve economic efficiencies tenfold, and will allow health departments to monitor and control a greater number of infectious diseases than at present.

Epidemiologists issue health alerts on to health worker phones using Sahana Alerting.



### Rasheda Sultana: Exemplar of mode-2 capacity-building

Rasheda Sultana, a regulatory economist at Grameenphone, the leading mobile telecom operator in Bangladesh, exemplifies CPRsouth's efforts at mode-2 capacity building. Rasheda first came in to contact with CPRsouth when she was selected as a young scholar at the third annual conference held in Beijing in 2008. She subsequently applied and was selected as a paper presenter at the fourth conference in Negombo, Sri Lanka; her paper, entitled, Mobile banking: An overview of regulatory frameworks in emerging markets, examined mobile banking business models and regulatory frameworks in emerging Asia. The paper has been downloaded 100 times and its abstract has been viewed over 300 times on SSRN as of 30 June 2010; it was also listed as one of ten top papers in the SSRN Economics eJournal, "Emerging Markets" in March 2010.

*"CPRsouth gives young scholars and paper presenters a valuable platform for both personal and professional growth. It contributes to individual capacity-building from three aspects; firstly, and most importantly, it gives attendees the opportunity to avail of the coaching/mentoring of senior scholars regarding research methods and its implications in the field of communications and policy. Secondly, CPRsouth provides a showcase for research work conducted by researchers in other countries or industries which helps one evaluate one's own work as well learn from others' work. Thirdly, cross-cultural interaction with people from different countries and professions enables attendees to share knowledge, experience and views. I have attended two CPRsouth conferences which have enriched my knowledge and opened doors for me to meet senior scholars, which would not have been possible otherwise. It has also given me the platform and confidence to present my work, which was later published on SSRN. The ranking the paper received as well as positive feedback from academia in the region really boosted my confidence and has encouraged me to continue my endeavor in carrying out research in new areas."*



### Mobile broadband quality tested in Colombo

If fixed broadband testing is like driving a light vehicle, mobile broadband testing is like piloting an aircraft. The complexity increases many fold. A mobile link has to be tested from multiple locations (since that is how it is used), both when stationary and on the move. Fixed testing can ignore the effect of end-device and operating system (a PC is a PC) but the capabilities of mobile handsets vary depending on its hardware and software.

LIRNEasia conducted the first round of mobile broadband testing in Colombo in June 2009 simulating as much as possible the true operational conditions when using mobile broadband services. Public transport was used as we believe those at the bottom of the pyramid (BOP) are more likely to use mobile Internet services from a bus or train, rather than from a car.

A recruited user testing mobile broadband speeds on a bus in Colombo



### Knowledge for development: Toward a framework for benchmarking the performance of universities in the South

The importance of knowledge for development is undisputed. So is the importance of the role played by universities in the production and dissemination of knowledge in the developed world. Less well understood is its role among universities in developing countries.

Sujata Gamage (PhD), Lead Scientist and Project Director at LIRNEasia, as part of her collaboration with Glenda Kruss (PhD) of the Human Science Research Council (HSRC), South Africa, hosted Il-haam Petersen (pictured), a research intern from the HSRC, at LIRNEasia for three months in 2009-10, to develop a common framework for benchmarking the performance of universities in the South.

From a range of benchmarking instruments, the team picked the Carnegie Foundation's basic classification framework as most appropriate for assessing the performance of universities in producing bachelor or associate degrees in South Africa as well as in South Asia. The cross-country benchmarking exercise revealed issues that intra-country benchmarking would not have. The results of the study were well received by Judy Backhouse and staff of the Council on Higher Education in South Africa as well as by S. Mahmood Raza and staff at the Higher Education Commission of Pakistan.

The World Bank and other intergovernmental organizations invest much in improving the quality and relevance of universities across the world; however, no substantive efforts have been made to benchmark their performance. This study shows that it may be possible to set up web-based benchmarking tools for the higher education sector in developing regions, similar to that provided by the Carnegie Foundation in the USA.

### Is the Federal Communications Commission following in LIRNEasia's footsteps?

The Federal Communications Commission (FCC) used the term "crowdsourcing" for what we called "volunteer computing." That was, perhaps, the only difference.

In March 2010, the FCC requested broadband and smartphone users in the USA to use their broadband testing tools to help the FCC and consumers know what speeds were actually available, and not just what was promised by service providers. Netizens can now go to the FCC's Broadband.gov site, enter their IP address and test their broadband speed using one of two testing tools.

We, however, have been at this game for nearly two years. In September 2008, LIRNEasia released the first version of a broadband speed test application, AT-Tester, developed by its research partner, the Indian Institute of Technology (IIT), Madras. The application can be downloaded from [www.broadbandasia.info](http://www.broadbandasia.info). LIRNEasia has also published findings from its own round of testing using the AT-Tester tool in multiple cities in Bangladesh, India and Sri Lanka. Initially compatible with only Windows XP, the software is now available on all Windows platforms. A web-based version is also available.

This was how Wired.com documented the FCC's efforts (which are applicable more or less to LIRNEasia's solution too):

*Crowdsourcing this data is a brilliant move, given that telecoms have long fought against telling federal regulators what areas they cover and at what speed, arguing that information will be used by competitors to poach their customers. The data can also be used as a way to prevent telecoms from over-promising and under-delivering on upload and download speeds. If you listen closely you might actually hear the telecom companies hitting the backspace key to revise the speed numbers on their promotional fliers.*

- Singel, R. (2010, March 11). *The FCC wants you to test your broadband speeds.* Available at <http://www.wired.com/epicenter/2010/03/fcc-broadband-test/>.

## Capacity-building

Through *CPRsouth*, LIRNEasia seeks to identify potential policy intellectuals in the Asia-Pacific and enhance their capacities. In addition, it provides conventional training.

### *CPRsouth4*, Negombo



*CPRsouth4*, December 2009, Negombo, Sri Lanka

The fourth Communication Policy Research south (*CPRsouth4*) conference, themed, “Truth to Power” was held in Negombo, Sri Lanka, on 5-8 December 2009. The conference was attended by 78 senior, mid-level and young scholars from 24 countries. Of the ten sessions, seven consisted of research papers selected through a competitive process. The remainder gave the attendees a glimpse of the manner in which policy processes are conducted and a flavor of research conducted by senior scholars. The tutorials gave 30 young scholars the opportunity to learn about the basics of information economics and communicating research to policymakers.

A majority of *CPRsouth* applicants are in academia (mode-1). However, participation by those whose primary work is not knowledge production (mode-2) is actively encouraged and has increased to 24 percent of selected applicants in 2009 compared to previous years (see p. 21).

*CPRsouth* conducts an annual survey to track the activities of past attendees (both paper presenters and young scholars). Table 6

shows the activity level of 45 participants of *CPRsouth* conferences 1, 2 and 3 between October 2008 and 2009. The response rate was 38 percent.

**Table 6:** Activities of past paper presenters and young scholars<sup>2</sup> in the year following the *CPRsouth3* conference (no. of respondents)

	Paper presenters	Young scholars
Wrote policy papers / briefs	11	11
Made policy submissions / presentations	9	10
Wrote op-ed pieces in the media	4	1
Gave media interviews	1	1
Wrote in blogs	6	3
Had journal publications accepted	7	6
Presented conference papers	13	8
Submitted thesis proposals	3	3
Submitted theses	3	4
Submitted grant proposals	4	6
Received grants	7	5

### Indicators training course, Bangkok

A training course on “Measuring information and communication technology access and use by households and individuals” was organized on 19-23 October 2009 in Bangkok, Thailand by LIRNEasia and the International Telecommunication Union (ITU). The Ministry of Information and Communication Technology (MICT), Thailand, served as local host.

The training covered topics on survey planning, data sourcing and collection techniques, questionnaire design, data processing and dissemination techniques, among others. Course participants consisted of staff from national statistics offices (NSOs) and other government institutions in 12 countries across the Asia-Pacific, including Afghanistan, Mongolia, Cambodia and Vietnam.

This course was a follow-up to previous NSO and NRA capacity-building programs conducted by LIRNEasia in 2007 and 2008.

<sup>2</sup> Based on annual survey responses of (all) past *CPRsouth* participants (paper presenters, young scholars, faculty and board members). Participants are cumulatively surveyed 10 months after the annual conference on their activities since the conference. The response rate for the 2009 survey was 38%.

### 13th executive course on telecom reform, Cape Town

The 13th executive course on telecom reform was held on 20-24 April 2009, in Cape Town, South Africa. It was offered by Research ICT Africa (RIA) and the University of Cape Town's Graduate School of Business. Rohan Samarajiva and Helani Galpaya served on the course faculty.

Themed "Connectivity and convergence: Alternative regulatory strategies for telecommunications", the course was designed to enhance the strategic thinking of a select group of senior decision-makers in telecom and related sectors in Africa and elsewhere. After having been offered in Europe, Asia, the Caribbean and Latin America, this executive program is now being offered in Africa.

### IDRC PAN-all conference, Penang

LIRNEasia was invited by the International Development Research Centre (IDRC) to conduct a training session and share its knowledge and experience on effective communication of research at the third IDRC Pan Asia Networking (PAN)-all partners' conference held on 10-12 June 2009 in Penang, Malaysia. The training, conducted by Rohan Samarajiva, Helani Galpaya and Nilusha Kapugama, covered topics from identification of relevant audiences to formulation of effective communication strategies.

### Workshop on communication for influence on policy and practice, Ulaanbaatar

Stemming from interactions at the IDRC PAN-all partners' conference in June 2009, Rohan Samarajiva and Helani Galpaya were invited to conduct a two-day workshop on "Communication for influence on policy and practice" on 16-17 October 2009 in Ulaanbaatar, Mongolia. The workshop was organized by the Development Research to Empower All Mongolians through Information Communications Technology (DREAM-IT) Mega Mongolia project. The workshop sought to provide training on effective communication strategies for taking research to policymakers and practitioners. Participants consisted of DREAM-IT project partners working in both government and non-government sectors.

### Other capacity-building activities

#### Teaching

In addition to the above capacity-building efforts, senior LIRNEasia staff members are often invited to teach and supervise theses at Sri Lankan universities. Helani Galpaya is currently supervising a Master's thesis on awareness and perception of Internet security among Sri Lankan university students, at the University of Colombo.

### Researcher training

While building capacity throughout the region, LIRNEasia also builds internal capacity. Training programs attended by staff included:

International program for development evaluation training 2009  
*Organized by the World Bank and Carleton University*  
8 June-3 July 2009. Ottawa, Canada

Development of evaluation capacity in ICT4D (DECI) meeting  
*Organized by the International Development Research Centre*  
11 June 2009. Penang, Malaysia

Course in social science research methodology  
*Organized by the Marga Institute*  
22 February-22 April 2010. Colombo, Sri Lanka

#### Internships

Aileen Agüero from the Instituto de Estudios Peruanos – Institute of Peruvian Studies (IEP)/ Diálogo Regional sobre la Sociedad de la Información (DIRSI), Pratchi Joshi from the Department of Communication and New Media of the National University of Singapore (NUS), Il-haam Petersen from the Human Science Research Council (HSRC), South Africa, and Haymar Win Tun from NUS's Lee Kwan Yew School of Public Policy completed one to six-month internships at LIRNEasia during 2009-10.

### Advocacy and dissemination

Serious and systematic attention to the problem of moving research findings to policy and regulatory practice has been a signature of LIRNEasia's work. Key to our approach has been the development and implementation of project-specific communication strategies, flexibly and opportunistically. It has also sought to break out of the straitjacket of project funding, by intervening on topics whenever policy windows open.

### Rapid response

Based on the idea of the teachable moment, LIRNEasia responds quickly to specific requests for advice by governments or other entities in the region. The response primarily takes the forms of (a) a written submission (e.g. to a public consultation or to media) or (b) a country visit that includes one or more presentations.

During the current period the following rapid responses were undertaken:

- Helani Galpaya of LIRNEasia with Alison Gillwald of Research ICT Africa (RIA) responded to the Bangladesh Telecommunication Regulatory Commission's (BTRC) public consultation paper on proposed significant market power (SMP) regulation. The response drew from South Africa's recent experience in using SMP determinations in regulation. Contrasting that experience with Namibia and Botswana, which do not use SMP, it was pointed out that implementing complicated market definitions or SMP determinations are often difficult, even for sophisticated and skill-endowed agencies in developed countries. Furthermore, implementing them in South Asia, given the levels of development, would be, at best, complicated and, at worst, unfeasible. Hence, it was recommended that the BTRC view with caution solutions that are taken "as-is" from developed countries, without recognizing ground realities in Bangladesh.
- LIRNEasia facilitated the publication of an article in one of Sri Lanka's leading English newspapers by Muhammed Aslam Hayat on regional experiences and concerns with mobile payments. Aslam is a legal expert currently based in Bangladesh but with extensive regional experience. The article was aimed at raising interest in mobile payments, in light of the Central Bank of Sri Lanka's indication, at the start of 2009, that it would be formulating policies addressing mobile payment solutions. Not having observed much progress on this front, LIRNEasia facilitated a contribution from Aslam, which was published in the Financial Times on 12 July 2009. The mobile payment regulations were issued just before the report went to press.
- Sometimes, the response is rapid, but it takes a little time for it to be implemented. LIRNEasia was asked several years ago by the Bhutan InfoComm and Media Authority (BICMA) for advice on how best to implement its legal mandate to ensure that media content was in line with Bhutanese culture. Knowing the miniscule size

of the regulatory agency and the difficulties of defining content standards and policing them, LIRNEasia proposed a self-regulatory model whereby associations of media suppliers (e.g., cable TV operators) would come up with the standards for their industry and ensure that the standards were adhered to; BICMA would enter the picture only when a dispute had to be resolved. We learned recently that this proposal has been implemented and is working quite well.

## Media coverage

This sub-section provides a list of selected media coverage of LIRNEasia activities received over the period, organized by research area/project.

Media are an indirect and supporting means of reaching LIRNEasia's target audiences (policymakers, regulators and industry leaders). LIRNEasia had significant interactions with the media over the period. Ten press releases were issued, in addition to many interviews. Media representatives were invited to ten of LIRNEasia's dissemination events. Articles and advertisements showing research findings have also been strategically placed in local newspapers to reach target audiences.

Table 7 summarizes the media that carried LIRNEasia stories in 2009-10. For a comprehensive list of coverage from 2004 to date (including Web links, where applicable), please visit <http://lirneasia.net/about/media-coverage/>.

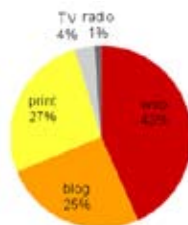


Figure 22: Coverage by media type (%), 2009-10

## Teleuse@BOP3

*PCs not the best vehicles for providing IT-delivered services to rural areas*  
Telecentre Magazine (India), 1 April 2009

*The economics of chhota recharge*  
The Financial Express (India), 22 May 2009

*Why wireless makes sense*  
fredericknoronha (via YouTube) (India), 14 June 2009

*Higher taxes lead to lower revenue: PTA shows futility of raising mobile taxes*  
TeaBreak (Pakistan), 25 June 2009

*Safe, comfy and chatting away - women's empowerment at PCO booths*  
Sindh Today (Pakistan), 28 June 2009

*TV coverage of presentation of findings from the Teleuse@BOP3 migrant worker study, Dhaka, Bangladesh*  
ATN Bangla (via YouTube) (Bangladesh), 28 June 2009

*Expat Bangladeshis spend more calling home than others: survey*  
bdnews24.com (Bangladesh), 28 June 2009

*TV coverage of presentation of findings from the Teleuse@BOP3 migrant worker study, Dhaka, Bangladesh*  
Boishakhi TV (via YouTube) (Bangladesh), 28 June 2009

*TV coverage of presentation of findings from the Teleuse@BOP3 migrant worker study, Dhaka, Bangladesh*  
Diganta TV (via YouTube) (Bangladesh), 28 June 2009

*TV coverage of presentation of findings from the Teleuse@BOP3 migrant worker study, Dhaka, Bangladesh*  
ETV (via YouTube) (Bangladesh), 28 June 2009

<p><i>Safe, comfy and chatting away: women's empowerment at PCO booths</i> Inditop.com (India), 28 June 2009</p>	<p><i>Coverage of Teleuse@BOP3 migrant worker study (in Bangla)</i> Banglabazar Patrika (Bangladesh), 29 June 2009</p>	<p><i>Public telephone booths: means to empower women</i> Khaleej Times (UAE), 29 June 2009</p>
<p><i>Safe, comfy and chatting away: women's empowerment at PCO booths</i> Jansamachar.net (India), 28 June 2009</p>	<p><i>Coverage of Teleuse@BOP3 migrant worker study (in Bangla)</i> Bhorer Kagoj (Bangladesh), 29 June 2009</p>	<p><i>Women's empowerment at PCO booths</i> Overseas Indian (India), 29 June 2009</p>
<p><i>Safe, comfy and chatting away: women's empowerment at PCO booths</i> NewKerala.com (India), 28 June 2009</p>	<p><i>Coverage of Teleuse@BOP3 migrant worker study (in Bangla)</i> Ittefaq (Bangladesh), 29 June 2009</p>	<p><i>Safe, comfy and chatting away: women's empowerment at PCO booths</i> NextBillion.net (International), 29 June 2009</p>
<p><i>Safe, comfy and chatting away: women's empowerment at PCO booths</i> Sify (India), 28 June 2009</p>	<p><i>Coverage of Teleuse@BOP3 migrant worker study (in Bangla)</i> Jaijaidin (Bangladesh), 29 June 2009</p>	<p><i>Empowered by phone</i> Shvoong (International), 29 June 2009</p>
<p><i>Safe, comfy and chatting away: women's empowerment at PCO booths</i> Sulekha.com (India), 28 June 2009</p>	<p><i>Coverage of Teleuse@BOP3 migrant worker study (in Bangla)</i> Jugantor (Bangladesh), 29 June 2009</p>	<p><i>Phones outnumber radios among South Asia's poor</i> The Hindu (India), 5 July 2009</p>
<p><i>Safe, comfy and chatting away: women's empowerment at PCO booths</i> WebIndia123.com (India), 28 June 2009</p>	<p><i>Expatriate Bangladeshis make calls home more than others</i> New Age (Bangladesh), 29 June 2009</p>	<p><i>Phones outnumber radios among poor in South Asia</i> New Kerala (India), 5 July 2009</p>
<p><i>Safe, comfy and chatting away: women's empowerment at PCO booths</i> Yahoo India (India), 28 June 2009</p>	<p><i>Bangladeshis spend more calling home than others</i> News Today (Bangladesh), 29 June 2009</p>	<p><i>Phones outnumber radios among poor in South Asia</i> Samachar.in (India), 5 July 2009</p>
<p><i>Safe, comfy and chatting away: women's empowerment at PCO booths</i> Aussielndolanka (International), 28 June 2009</p>	<p><i>Coverage of Teleuse@BOP3 migrant worker study (in Bangla)</i> Prothom Alo (Bangladesh), 29 June 2009</p>	<p><i>Phones outnumber radios among poor in India</i> Silicon India (India), 5 July 2009</p>
<p><i>Safe, comfy and chatting away: women's empowerment at PCO booths</i> Breaking News 24/7 (International), 28 June 2009</p>	<p><i>Coverage of Teleuse@BOP3 migrant worker study (in Bangla)</i> Shamokal (Bangladesh), 29 June 2009</p>	<p><i>Phones outnumber radios among poor in South Asia</i> Smashits.com (India), 5 July 2009</p>
<p><i>Safe, comfy and chatting away: women's empowerment at PCO booths</i> Thalndian (International), 28 June 2009</p>	<p><i>Bangladeshi migrants call home more frequently: survey</i> The Daily Star (Bangladesh), 29 June 2009</p>	<p><i>Phones outnumber radios among poor in South Asia</i> Prokerala.com (India), 5 July 2009</p>
<p><i>Coverage of Teleuse@BOP3 migrant worker study (in Bangla)</i> Amader Shomoy (Bangladesh), 29 June 2009</p>	<p><i>Calling home means a lot to Bangladeshi expat workers</i> The Financial Express (Bangladesh), 29 June 2009</p>	<p><i>Phones outnumber radios among poor in South Asia</i> Thalndian (International), 5 July 2009</p>
<p><i>Coverage of Teleuse@BOP3 migrant worker study (in Bangla)</i> Amar Desh (Bangladesh), 29 June 2009</p>		<p><i>Phones outnumber radios among poor in South Asia</i> Zillr (International), 5 July 2009</p>

<i>Phones outnumber radios among poor in South Asia</i> Breaking News 24/7 (International), 5 July 2009	Digital Opportunity (International), 11 July 2009	<i>Coverage of Teleuse@BOP3 migrant worker study, (in Sinhala)</i> Ravaya (Sri Lanka), 2 August 2009
<i>No computers in poor Bangladeshi households</i> News Bangla (Bangladesh), 6 July 2009	<i>Only Indians make, receive missed calls: Study</i> South-South Information Gateway (International), 11 July 2009	<i>Mobile phones for inward remittances, awaiting guidelines</i> The Sunday Times (Sri Lanka), 2 August 2009
<i>No computers in poor Bangladeshi households</i> New Age (Bangladesh), 7 July 2009	<i>Only Indians make, receive missed calls</i> Telugu Dreams (India), 13 July 2009	<i>Sri Lanka: Mobile phones for inward remittances, awaiting guidelines</i> Diaspora Journey (International), 3 August 2009
<i>No computers in poor Bangladeshi households</i> Dhaka Mirror (Bangladesh), 7 July 2009	<i>Only Indians make, receive missed calls: Study</i> NAM News Network (International), 13 July 2009	<i>India's "connected" poor</i> Business Today (India), 9 August 2009
<i>I'll give you a missed call</i> Uber Desi (India), 9 July 2009	<i>Don't talk time</i> The Times of India (India), 15 July 2009	<i>TV interview with Ayesha Zainudeen on the Teleuse@BOP3 study</i> Channel One (MTV): Biz 1st (Sri Lanka), 14 August 2009
<i>Only Indians make, receive missed calls: study</i> The Times of India (India), 10 July 2009	<i>Over 100 million rural mobile subscribers in India: Opportunity for MVAS</i> Watblog (India), 15 July 2009	<i>Cellphones can shrink geographic distances</i> Zomzy Studio (International), 17 August 2009
<i>Missed facts in missed calls article</i> Techgoss (India), 10 July 2009	<i>Plain talk? Not anymore</i> Voice & Data (India), 20 July 2009	<i>When FM radio meets the mobile phone in Pakistan</i> MediaShift Idea Lab (USA), 19 August 2009
<i>Lifestyle: Only Indians make, receive missed calls - study</i> Spoonfeedin (India), 10 July 2009	<i>Radio interview with Kabir Hashim</i> Lakhanda (Sri Lanka), 24 July 2009	<i>The dream of a digital Bangladesh</i> The Daily IJ (Germany), 24 November 2009
<i>Only Indians make, receive missed calls: Study</i> Chaos, myself and the universe (via blogspot) (India), 10 July 2009	<i>Million mark: Sri Lanka Airtel says tops one million customers</i> Lanka Business Online (Sri Lanka), 28 July 2009	<i>Coverage of Helani Galpaya's presentation entitled, "Political economy of ICT in Asia" at the Symbiosis Institute of Telecom Management</i> YouTube (India), 29 November 2009
<i>Only Indians make, receive missed calls</i> Exbii (International), 10 July 2009	<i>Sri Lanka Airtel says tops one million customers</i> Lanka Business Online (Sri Lanka), 28 July 2009	<i>India: Mobiles for gender empowerment</i> IPS (International), 4 December 2009
<i>Only Indians make, receive missed calls, study</i> Bollywhat Forum (India), 10 July 2009	<i>LIRNEasia clarifies facts</i> Techgoss (India), 29 July 2009	
<i>Phones outnumber radios among South Asia's poor</i>	<i>Teleuse survey: what women want</i> Voice & Data (India), 1 August 2009	

*Bottom of the pyramid expenditure patterns on mobile phone services in selected emerging Asian countries*  
DIRSI (Peru), 9 December 2009

*Move over computer, the mobile is here*  
Expanding Horizons (Finland), 1 January 2010

*Teleuse at the bottom of the pyramid (Part 1 of 2)*  
Encyclopedia.com (International), 1 January 2010

*Poor people in Bangladesh own more mobile phones than the same group in India and Pakistan*  
Bangladesh Phone Number (Bangladesh), 2 January 2010

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### **AgInfo**

*Farming message: Sri Lankan farmers can gain from mobile phone services - expert*  
Lanka Business Online (Sri Lanka), 14 December 2009

*Sri Lanka farmers get mobile phone trade service*  
e-agriculture (International), 23 December 2009

*Dialog TradeNet: GGS in partnership*  
The Daily News (Sri Lanka), 24 December 2009

*Dialog TradeNet: GGS in partnership set to revolutionize agri-market access*  
Spot.lk (Sri Lanka), 24 December 2009

*Empowering farmers with data*  
The Nation (Sri Lanka), 27 December 2009

### **Benchmarking telecom sector performance**

*Reducing roaming rates: making South Asian regional integration real*  
Lanka Business Online (Sri Lanka), 7 April 2009

*Broadband quality war: are you a winner or a loser?*  
Wireless Bangladesh (Bangladesh), 4 May 2009

*Workshop on mobile broadband quality of service experience, Colombo 2009*  
Wireless Bangladesh (via BlogCatalog) (Bangladesh), 7 May 2009

*Non-metros enjoy three times better broadband service*  
SiliconIndia (India), 26 May 2009

*Rest of TN has better broadband quality than Chennai*  
The Economic Times (India), 26 May 2009

*Broadband woes continue*  
Express Computer (India), 7 September 2009

*Net users in South Asia get less value for money*  
The Hindu (India), 9 November 2009

*Digital divide: South Asian broadband stuck in international bottleneck - study*  
Lanka Business Online (Sri Lanka), 9 November 2009

*Developed countries getting better value from broadband*  
Top 10 broadband (UK), 9 November 2009

*South Asia news in brief: 29 October-11 November 2009*  
SciDev (International), 11 November 2009

*Sri Lanka's broadband shows over-advertising and under-delivery*  
The Sunday Times (Sri Lanka), 15 November 2009

*Ideal spectrum: Sri Lanka to get high speed WiMAX connectivity - regulator*  
Lanka Business Online (Sri Lanka), 3 December 2009

*Sri Lanka to get high speed WiMAX connectivity: Regulator*  
AJ's blog (via WordPress) (Sri Lanka), 3 December 2009

*New Year greetings.... FX & Nat Geo Wild (comments)*  
Dialog TV Forum (Sri Lanka), 29 December 2009

*Sri Lanka regulator checks advertised broadband speeds*  
Lanka Business Online (Sri Lanka), 30 December 2009

*Sri Lanka regulator checks advertised broadband speeds*  
AJ's Blog (via WordPress) (Sri Lanka), 30 December 2009

*Prerequisites for making Sri Lanka (Gampaha District) a knowledge hub*  
Lanka Business Online (Sri Lanka), 1 March 2010

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### **Measuring regulatory performance**

*Coverage of Helani Galpaya's presentation entitled, "Political economy of ICT in Asia" at the Symbiosis Institute of Telecom Management*  
YouTube (India), 29 November 2009

*Slow connections: Sri Lanka behind Pakistan in regulatory transparency - study*  
Lanka Business Online (Sri Lanka), 29 December 2009

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### **Mobile 2.0@BOP**

*Notes from the ICA pre-conference*  
Mobile Communication (International), 24 May 2009

*World Disasters Report 2009*  
International Red Cross (International), 1 June 2009

*Early warning: cell broadcast ideal for Maldives public warning - think tank*  
Lanka Business Online (Sri Lanka), 17 July 2009

*Mobile messages could aid early warning in the Maldives*  
SciDev (International), 18 August 2009

*Now use mobile to get pension*  
The Financial Chronicle (India), 9 November 2009

*Exit PC, enter mobile*  
The Hindu Business Line (India), 16 November 2009

*Mass banking through the mobile: move over e-governance, social services are now reaching the bottom of the pyramid through cell phones*  
The Financial Express (India), 7 January 2010

*Merge or lose out: confusion over spectrum allocation still prevails. So what would be the best model for spectrum management?*  
Voice & Data (India), 3 February 2010

*Lack of policy prevents mobile banking model from clicking*  
Economic Times (India), 3 March 2010

*LIRNEasia unveils report on m-money in Bangladesh*  
Cnews (Bangladesh), 31 March 2010

---

### **K2I**

*Religious events related 3R programs*  
Sri Lanka Girl Guides' Association (Sri Lanka), 17 June 2009

*Going green*  
The Sunday Times (Sri Lanka), 19 July 2009

*Waste composition analysis to estimate prevalence of recyclables*  
Environment Sri Lanka Blog (Sri Lanka), 1 February 2010

---

### **RTBP**

*ICTD2009 highlights new developments in technology for developing countries*  
Zawya.com (International), 18 April 2009

---

### **HazInfo**

*A lasting wave: five years after the Indian Ocean tsunami, reflections on what was lost and what was learned*  
Newsweek, (USA), 21 December 2009

*A lasting wave: five years after the Indian Ocean tsunami, reflections on what was lost and what was learned*  
NAFSO-Convener's diary (Sri Lanka), 21 December 2009

*Sri Lanka: financial times elaborates on spam issue raised by LIRNEasia*  
newSriLanka (Sri Lanka), 8 January 2010

### **Book: ICT infrastructure in emerging Asia: policy and regulatory roadblocks**

*Withdrawing from the world: ICTs and censorship*  
NewSriLanka (Sri Lanka), 16 January 2010

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### **CPRsouth**

*Mentors for PhD in biotechnology, JMETS, GATE, MTech Engineering*  
MentorPolis Blog (International), 21 December 2009

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### **LIRNEasia@5**

*Radio interview with LIRNEasia senior staff on its research work and the LA@5 conference*  
Radio Canada International: Masala Canada (Canada), 28 November 2009

*Evident policy: lack of evidence-based policymaking can be disastrous - Sri Lanka policy forum*  
Lanka Business Online (Sri Lanka), 10 December 2009

*Live blogging LIRNEasia conference*  
Indi.ca (Sri Lanka), 10 December 2009

*Sri Lanka policy forum in knowledge economy drive*  
AJ's blog (via WordPress) (Sri Lanka), 11 December 2009

*TV interview with Rohan Samarajiva and Alison Gillwald*  
Channel One: Biz 1st (Sri Lanka), 11 December 2009

*Knowledge drive: Sri Lanka policy forum in knowledge economy drive*  
Lanka Business Online (Sri Lanka), 11 December 2009

*Capital question: Sri Lanka telecom CAPEX plummet amid price war - operators*  
Lanka Business Online (Sri Lanka), 15 December 2009

*New data on mobile tariffs in Latin America*  
DIRSI (International), 17 December 2009

*Live online*  
The Sunday Leader (Sri Lanka), 20 December 2009

*Tigo and Dialog CEOs on the state of mobile industry*  
The Sunday Leader (Sri Lanka), 20 December 2009

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## General

*Government, regulation irrelevant in telcoms*  
South Africa Connect (South Africa), 15 April 2009

*Govt. regulation irrelevant in telecoms*  
ITWeb (South Africa), 15 April 2009

*Sarvodaya Institute of Higher Learning*  
Sarvodaya (Sri Lanka), 1 May 2009

*Discussing power conservation measures in AC comfort*  
The Sunday Times (Sri Lanka), 24 May 2009

*Reconstructing Sri Lanka: top down, bottom up, or both?*  
new SriLanka (Sri Lanka), 15 June 2009

*Daft draft: Sri Lanka govt. transport policy slammed by critics*  
Lanka Business Online (Sri Lanka), 24 July 2009

*Domestic freight, postwar regions not given enough attention*  
The Island (Sri Lanka), 25 July 2009

*Dr. Harsha de Silva picked for Eisenhower Fellowship*  
The Island (Sri Lanka), 26 July 2009

*Wire drop: Sri Lanka wireline use drops*  
Lanka Business Online (Sri Lanka), 29 July 2009

*Small is the revolution*  
Voice & Data (India), 27 August 2009

*Sri Lanka columnist shortlisted for Bastiat online journalism prize*  
Lanka Business Online (Sri Lanka), 28 August 2009

*South Asia mobile summit starts in city*  
The New Nation (Bangladesh), 22 October 2009

*Bangladesh ranks low in South Asia mobile use*  
The Daily Star (Bangladesh), 26 October 2009

*eSri Lanka: promise realized?*  
IFAP Information Society (International), 3 December 2009

*Digital divide: Sri Lanka state ICT initiative funding not guaranteed - World Bank*  
Lanka Business Online (Sri Lanka), 4 December 2009

*Sri Lanka's computer literacy up; UN e-government rankings down*  
Lanka Polity (Sri Lanka), 8 December 2009

*eSri Lanka: promise realized?*  
newSriLanka (Sri Lanka), 20 December 2009

*Sri Lanka Bangladesh population: dividend of danger?*  
newSriLanka (Sri Lanka), 4 January 2010

*Rajapaksa's New Year SMS smacks of bias towards one candidate - experts*  
The Sunday Times (Sri Lanka), 17 January 2010

*Mobile broadband in India*  
Telecomstatistics.com (International), 8 February 2010

*Choices: prerequisites for making Sri Lanka a hub - telecom*  
Lanka Business Online (Sri Lanka), 8 February 2010

*Prerequisites for making Sri Lanka a hub*  
AJ's blog (via WordPress) (Sri Lanka), 8 February 2010

*Price-fixing by mobile telecom companies*  
State of Telecom Industry in Pakistan (Pakistan), 12 February 2010

*Communications must contribute to economic growth, (in Sinhala)*  
Ravaya (Sri Lanka), 14 February 2010

*ICT industry fears Internet censorship; TRC chief denies*  
Daily FT (Sri Lanka), 15 February 2010

*Quo warranto, TRC?*  
Daily FT (Sri Lanka), 15 February 2010

*Speechless*  
The Puppeteer (via WordPress) (Sri Lanka), 15 February 2010

*ICTs and development: workshop at IIT, Delhi (Day 1)*  
Tim Unwin's blog (International), 11 March 2010

**Table 7:** Media that carried LIRNEasia stories, 2009-10 (ordered by frequency)

Number	Name of publisher	Country	Number	Name of publisher	Country
1	Lanka Business Online	Sri Lanka	59	Jaijaidin	Bangladesh
2	new SriLanka	Sri Lanka	60	Jansamachar.net	India
3	The Sunday Times	Sri Lanka	61	Jugantor	Bangladesh
4	AJ's blog (via WordPress)	Sri Lanka	62	Khaleej Times	UAE
5	Impact PR (via YouTube)	Bangladesh	63	Lakhanda	Sri Lanka
6	Voice & Data	India	64	Lanka Polity	Sri Lanka
7	DIRSI	International	65	MediaShift Idea Lab	USA
8	Ravaya	Sri Lanka	66	MentorPolis Blog	International
9	SiliconIndia	India	67	Mobile Communication	International
10	Breaking News 24/7	International	68	NAFSO-Convener's Diary	Sri Lanka
11	Channel One (MTV): Biz 1st	Sri Lanka	69	NAM News Network	International
12	Cnews	Bangladesh	70	News Bangla	Bangladesh
13	Daily FT	Sri Lanka	71	News Today	Bangladesh
14	e-agriculture	International	72	Newsweek	USA
15	New Age	Bangladesh	73	NextBillion.net	International
16	New Kerala	India	74	Overseas Indian	India
17	SciDev	International	75	Prokerala.com	India
18	Symbiosis Institute of Telecom Management	India	76	Prothom Alo	Bangladesh
19	Techgoss	India	77	Radio Canada International	Canada
20	Thalndian	International	78	Samachar.in	India
21	The Daily Star	Bangladesh	79	Sarvodaya	Sri Lanka
22	The Economic Times	India	80	Shamokal	Bangladesh
23	The Financial Express	India	81	Shvoong	International
24	The Hindu	India	82	Sify	India
25	The Island	Sri Lanka	83	Sindh Today	Pakistan
26	The Sunday Leader	Sri Lanka	84	Smashits.com	India
27	The Times of India	India	85	South Africa Connect	South Africa
28	Amader Shomoy	Bangladesh	86	South-South Information Gateway	International
29	Amar Desh	Bangladesh	87	Spoonfeedin	India
30	ATN Bangla	Bangladesh	88	Spot.lk	Sri Lanka
31	AussielndoLanka	International	89	Sri Lanka Girl Guides' Association	Sri Lanka
32	Banglabazar Patrika	Bangladesh	90	State of Telecom Industry in Pakistan	Pakistan
33	Bangladesh Phone Number	Bangladesh	91	Sulekha.com	India
34	bdnews24.com	Bangladesh	92	TeaBreak	Pakistan
35	Bhorer Kagaj	Bangladesh	93	Telecentre Magazine	India
36	Boishakhi TV	Bangladesh	94	Telecomstatistics.com	International
37	Bollywhat Forum	India	95	Telugu Dreams	India
38	Business Today	India	96	The Daily IJ	Germany
39	Chaos, myself and the Universe (via blogspot)	India	97	The Daily Mirror	Sri Lanka
40	Dhaka Mirror	Bangladesh	98	The Daily News	Sri Lanka
41	Dialog TV Forum	Sri Lanka	99	The Financial Chronicle	India
42	Diaspora Journey	International	100	The Financial Express	Bangladesh
43	Diganta TV	Bangladesh	101	The Hindu Business Line	India
44	Digital Opportunity	International	102	The Nation	Sri Lanka
45	Encyclopedia.com	International	103	The New Nation	Bangladesh
46	Environment Sri Lanka Blog	Sri Lanka	104	The Puppeteer (via WordPress)	Sri Lanka
47	ETV	Bangladesh	105	Tim Unwin's blog	UK
48	Exbii	International	106	Top 10 broadband	UK
49	Expanding Horizons	Finland	107	Uber Desi	India
50	Express Computer	India	108	Vinuthomas.com	India
51	fredericknoronha (via YouTube)	India	109	Watblog	India
52	IFAP Information Society	International	110	WebIndia123.com	India
53	Indi.ca	Sri Lanka	111	Wireless Bangladesh	Bangladesh
54	Inditop.com	India	112	Wireless Bangladesh (via BlogCatalog)	Bangladesh
55	International Red Cross	Switzerland	113	Yahoo India	India
56	IPS	International	114	Zawya.com	International
57	Ittefaq	Bangladesh	115	Zillr	International
58	ITWeb	South Africa	116	Zomzy Studio	International

## Conferences, workshops and media events

This sub-section lists the conferences, workshops and media events that LIRNEasia research has been disseminated at over the period, through invited talks, keynotes, panel chairing and participation, inter alia; the entries are organized by research area/project.

### **Teleuse@BOP3**

*SA connect public seminar series*

Organized by the Graduate School of Business, University of Cape Town  
14 April 2009. Cape Town, South Africa

*Connectivity and convergence: Alternative regulatory strategies for telecommunications*  
Organized by LIRNE.NET and the Graduate School of Business, University of Cape Town  
14-17 April 2009. Cape Town, South Africa

*Mobile 2.0: Beyond voice? Pre-conference of the International Communication Association (ICA)*

Organized by LIRNEasia  
20-21 May 2009. Chicago, USA

*IDRC Pan Asia Networking (PAN)-all partners' conference*

Organized by the International Development Research Centre (IDRC)  
12-14 June 2009. Penang, Malaysia

*3rd annual connecting rural communities Asia forum*

Organized by the Commonwealth Telecommunications Organization (CTO)  
3-25 June 2009. New Delhi, India

*LIRNEasia dissemination event (Bangladesh): Teleuse@BOP3*

Organized by LIRNEasia  
28 June 2009. Dhaka, Bangladesh



### **LIRNEasia at IDRC PAN-all partners' conference**

*Photo courtesy of Suchit Nanda*

In June 2009, IDRC invited participants from organizations funded by the Pan Asia Networking (PAN) program to a three-day networking meeting in Penang, Malaysia. While many activities were arranged as breakout sessions and workshops, LIRNEasia, as a "flagship project" (their words, not ours), was asked to participate in two plenary sessions. The first saw Helani Galpaya participating in the "Change talk show," an Oprah-style show complete with the audience being warmed up, opening music and commercial breaks. IDRC Director of Information and Communication Technologies for Development (ICT4D), Michael Clarke was Oprah. Helani talked about policy changes enabled by IDRC's funding of LIRNEasia in the Asia-Pacific region. The next day, Rohan Samarajiva was the proponent in "The great mobile debate", a highly entertaining verbal dual between him and Rafal Rohozinski, Principal with the SecDev Group and former Director of the Advanced Network Research Group, Cambridge Security Program (who also happened to be an old friend of Rohan's from when they were two of five Ford Foundation funded fellows at the Social Science Research Council). The resolution under debate was that "mobiles have the potential to be the most transformative ICT for developing countries".

Rohan made a data-heavy opening statement, drawing from LIRNEasia's research on mobiles and citizens at the bottom of the pyramid. Rafal upped the ante by appealing vigorously (and loudly) to emotion. However, Rohan lived up to his introduction as "Rohan 'Pit Bull' Samarajiva" by making an even more dramatic response, and, in the end, won the debate with a mixture of fact and vicious rebuttal. The winner was selected by the audience voting with their feet, moving from one side of the room to the other as the debate progressed. The YouTube videos of the debate (<http://www.youtube.com/watch?v=KQ3Xfkzr6YY> and [http://www.youtube.com/watch?v=xaXjXm0k\\_5M](http://www.youtube.com/watch?v=xaXjXm0k_5M)) testify to the entertainment value of the debate.

*TEDx Colombo*

Organized by Beyond Borders  
19 July 2009. Colombo, Sri Lanka

*Policy coherence in the application of information and communication technologies for development*

Organized by the OECD and infoDev/World Bank  
10-11 September 2009. Paris, France

*Asian telecom seminar*

Organized by the Symbiosis Institute of Telecom Management  
25-26 September 2009. Pune, India

*The 37th research conference on communication, information and Internet policy*

Organized by Telecom Policy Research Conference (TPRC) Secretariat  
25-27 September 2009. Fairfax, USA

*Mobile communication and social policy*

Organized by Rutgers University  
9-11 October 2009. New Brunswick, USA

*Communicating for influence on policy for researchers (training)*

Organized by the DREAM IT Mega Mongolia Project  
16-17 October 2009. Ulaanbaatar, Mongolia

*Measuring ICT access and use by households and individuals (training)*

Organized by LIRNEasia and the ITU; hosted by the Ministry of Information and Communication Technology (MICT), Thailand  
19-23 October 2009. Bangkok, Thailand

*LIRNEasia dissemination event (India): Broadband quality of service experience (QoSE)*

Organized by LIRNEasia and the Indian Institute of Technology (IIT), Madras  
3 November 2009. Chennai, India

*LIRNEasia dissemination event (India, Part 1): Mobile2.0@BOP*

Organized by LIRNEasia  
5 November 2009. New Delhi, India

*Alternatives for infrastructure development and broadband access*

Organized by the Secretariat of Strategic Affairs of the Presidency  
16 November 2009. Brasilia, Brazil

*Expanding access to the Internet and broadband for development*

Organized by the OECD  
16 November 2009. Sharm el Sheikh, Egypt

*National symposium at the Indira Gandhi National Open University*

Organized by the Indira Gandhi National Open University  
20 November 2009. New Delhi, India

*4th Communication Policy Research south (CPRsouth4) conference*

Organized by the CPRsouth Secretariat and LIRNEasia  
5-8 December 2009. Negombo, Sri Lanka

*LIRNEasia@5: Research → policy → knowledge-based economies*

Organized by LIRNEasia  
9-11 December 2009. Colombo, Sri Lanka

*Pacific telecom conference (PTC) 2010*

Organized by the PTC Secretariat  
17-20 January 2010. Honolulu, USA

*ICTs and development: an international workshop for theory, practice and policy*

Organized by the Indian Institute of Technology (IIT), Delhi  
11-12 March 2010. New Delhi, India

*ITU-APT annual convention on equitable communication for all*

Organized by the ITU-APT Foundation of India  
22 March 2010. New Delhi, India

*18th convergence India*

Organized by Exhibitions India Group  
23-25 March 2010. New Delhi, India

*The 25th European communications policy research conference (euroCPR)*

Organized by the EuroCPR Secretariat  
28-30 March 2010. Brussels, Belgium

**AgInfo**

*Conference on protecting the poor in Sri Lanka in crisis and beyond*

Organized by the Institute of Policy Studies and the World Bank  
24 June 2009. Colombo, Sri Lanka

*Joint national conference on information technology in agriculture*

Organized by the University of Moratuwa and the University of Ruhuna  
16 July 2009. Moratuwa, Sri Lanka

*The 27th international conference of agricultural economists*

Organized by the International Association of Agricultural Economists  
16-22 August 2009. Beijing, China

*4th Communication Policy Research south (CPRsouth4) conference*

Organized by CPRsouth Secretariat and LIRNEasia  
5-8 December 2009. Negombo, Sri Lanka

*LIRNEasia@5: Research → policy → knowledge-based economies*

Organized by LIRNEasia  
9-11 December 2009. Colombo, Sri Lanka

*The launch of Dialog TradeNet*

Organized by Dialog Axiata PLC  
23 December 2009. Colombo, Sri Lanka

**Benchmarking telecom sector performance**

*SA connect public seminar series*

Organized by the Graduate School of Business, University of Cape Town  
14 April 2009. Cape Town, South Africa

*Connectivity and convergence: alternative regulatory strategies for telecommunications*

Organized by LIRNE.NET and the Graduate School of Business, University of Cape Town  
14-17 April 2009. Cape Town, South Africa

*Broadband quality war: are you a winner or a loser?*

Organized by LIRNEasia and the Institution of Engineers, Sri Lanka  
29 April 2009. Colombo, Sri Lanka

*Mobile broadband quality of service experience (QoSE) measuring approaches*

Organized by LIRNEasia  
30 April 2009. Colombo, Sri Lanka

*IDRC Pan Asia Networking (PAN)-all partners' conference*

Organized by the International Development Research Centre (IDRC)  
12-14 June 2009. Penang, Malaysia

*Policy coherence in the application of information and communication technologies for development*

Organized by the OECD and infoDev/World Bank  
10-11 September 2009. Paris, France

*Beyond broadband access: data-based information policy for a new administration*

Organized by the Pennsylvania State University, Michigan State University, Rutgers University, Beijing University of Posts and Telecommunications and New America Foundation's Open Technology Initiative  
22-24 September 2009. Fairfax, USA

*Asian telecom seminar*

Organized by the Symbiosis Institute of Telecom Management  
25-26 September 2009. Pune, India

*Communicating for influence on policy for researchers (training)*

Organized by the DREAM IT Mega Mongolia Project  
16-17 October 2009. Ulaanbaatar, Mongolia

*Measuring ICT access and use by households and individuals (training)*

Organized by LIRNEasia and the ITU; hosted by the Ministry of Information and Communication Technology (MICT), Thailand  
19-23 October 2009. Bangkok, Thailand

**How the developing world may participate in the global Internet economy: Innovation driven by competition**

Much of LIRNEasia's research in 2009-10 was based on the idea that the mobile is becoming the primary device through which the BOP in emerging markets (such as the ones that LIRNEasia works in) engages with the Internet, or the tasks normally associated with the Internet such as information-retrieval, payments and remote computing. The Teleuse@BOP3 and Mobile2.0@BOP research provide evidence that this is beginning to happen.

In September 2009, Chair and CEO Rohan Samarajiva was invited to author and present a background paper for a joint workshop organized by the Organization for Economic Co-operation and Development (OECD) and the Information for Development Program (InfoDev) / World Bank on "Policy coherence in the application of information and communication technologies for development". The paper went through review within OECD and infoDev and was presented at a workshop in Paris and also at the Internet Governance Forum in Sharm el Sheikh, Egypt.

The fundamental argument of the paper is that many millions of poor people are engaging in tasks normally associated with the Internet such as information-retrieval, payments and remote computing using relatively simple mobiles. Understanding the business model that enabled impressive gains in voice connectivity as well as the beginnings of more-than-voice applications over mobiles is important not only because widespread broadband access among the poor is likely to be achieved by extending this model but because it would be the basis of coherent and efficacious policy and regulatory responses.

The final text appears in p. 75-118 of *ICTs for development: Improving policy coherence*. Paris: OECD: <http://www.oecd.org/dataoecd/39/15/44003919.pdf>.

*LIRNEasia dissemination event (India): Broadband quality of service (QoSE) experience*

Organized by LIRNEasia and the Indian Institute of Technology (IIT), Madras  
3 November 2009. Chennai, India

*Expanding access to the Internet and broadband for development*

Organized by the OECD  
16 November 2009. Sharm el Sheikh, Egypt

*4<sup>th</sup> Communication Policy Research south (CPRsouth4) conference*

Organized by the CPRsouth Secretariat and LIRNEasia  
5-8 December 2009. Negombo, Sri Lanka

*LIRNEasia@5: Research → policy → knowledge-based economies*  
Organized by LIRNEasia

9-11 December 2009. Colombo, Sri Lanka

*How broad is your broadband?*

Organized by LIRNEasia  
13 February 2010. Colombo, Sri Lanka

*ICTs and development: an international workshop for theory, practice and policy*

Organized by the Indian Institute of Technology (IIT), Delhi  
11-12 March 2010. New Delhi, India

*18th convergence India*

Organized by Exhibitions India Group  
23-25 March 2010. New Delhi, India

**Measuring regulatory performance**  
*Connectivity and convergence: alternative regulatory strategies for telecommunications*

## Mobile 2.0: What we have learnt



LIRNEasia's key research theme for 2008-10 explored the use of mobiles for more-than-voice. This included services such as micropayments and remittances, agriculture applications and e-government services; in addition, fundamental policy and regulatory issues affecting the evolution of mobile technology along this path was also explored. Below is a snapshot of selected findings:

- Consumers demand a range of mobile content and applications. Mobile service providers would be best served by leaving the necessary innovation to applications providers, while focusing their energies on extending connectivity and on payment capabilities. In short, the app store model.
  - Even in unfavorable environments, innovative mobile-based marketplaces such as CellBazaar (Bangladesh) link buyers and sellers, providing the first step towards affordable m-commerce.
  - M-payments and the use of automated ticketing machines can address most concerns of bus owners and commuters. The main hurdles will be the drivers and conductors, who may benefit from the pilferage possible through current manual revenue collection systems.
- Using a mobile phone for the National Old Age Pension (NOAP) in Andhra Pradesh, India, eliminates two major issues: (i) logistical difficulties in making payments to the unbanked; and (ii) money leakages within the system caused by phantom beneficiaries.
  - Mobile service providers and financial institutions such as banks have an incentive to offer m-money services. However, effective steps need to be taken in addressing mental, material and skill barriers connected to accessing these services, particularly among those at the bottom of the pyramid (BOP).
  - Telecom regulators should incentivize operational efficiency and innovation by mandating spectrum-sharing and trading among service providers. This could likely lead to tariff reductions.
  - The key challenge in implementing m-agriculture applications is localization. Mobile service providers should place greater emphasis on voice-based solutions, important for reaching partial-literates.
  - Mobile number portability (MNP) may not be as useful as it appears. Multiple SIM use among the poor is likely to result in low MNP take-up at the BOP.

Organized by LIRNE.NET and the Graduate School of Business, University of Cape Town  
14-17 April 2009. Cape Town, South Africa

*4<sup>th</sup> International Telecommunications Society (ITS) Africa-Asia-Australasia regional conference*

Organized by the ITS Secretariat  
16-18 August 2009. Perth, Australia

*Asian telecom seminar*

Organized by the Symbiosis Institute of Telecom Management  
25-26 September 2009. Pune, India

*LIRNEasia dissemination event (Thailand): Telecom regulatory environment (TRE)*

Organized by LIRNEasia, the Thai Media Policy Advocacy Center, Chulalongkorn University and Siam Intelligence Unit, Thailand  
19 October 2009. Bangkok, Thailand

*Alternatives for infrastructure development and broadband access*

Organized by the Secretariat of Strategic Affairs of the Presidency  
16 November 2009. Brasilia, Brazil

**Mobile2.0@BOP**

*Mobile 2.0: beyond voice? Pre-conference of the International Communication Association (ICA)*

Organized by LIRNEasia and the ICA  
20-21 May 2009. Chicago, USA

*Release of report on cell broadcasting for early disaster warning in the Maldives*

Organized by LIRNEasia and the Communications Authority of the Maldives  
15 July 2009. Male, Maldives

*Policy coherence in the application of information and communication technologies for development*

Organized by the OECD and infoDev/  
World Bank  
10-11 September 2009. Paris, France

*Mobile communication and social policy*

Organized by Rutgers University  
9-11 October 2009. New Brunswick, USA

*LIRNEasia dissemination event (Thailand):*

*Telecom regulatory environment (TRE)*  
Organized by LIRNEasia, the Thai Media Policy Center, Chulalongkorn University, and Siam Intelligence Unit, Thailand  
19 October 2009. Bangkok, Thailand

*2<sup>nd</sup> India disaster management congress*

Organized by the National Institute of Disaster Management (NIDM)  
4-6 November 2009. New Delhi, India

*LIRNEasia dissemination event (India, Part 1):*

*Mobile2.0@BOP*  
Organized by LIRNEasia  
5 November 2009. New Delhi, India

*Expanding access to the Internet and broadband for development*

Organized by the OECD  
16 November 2009. Sharm el Sheikh, Egypt

*Civil protection forum: towards a more resilient society*

Organized by the European Commission  
25-26 November 2009. Brussels, Belgium

*4<sup>th</sup> Communication Policy Research south (CPRsouth4) conference*

Organized by the CPRsouth secretariat and LIRNEasia  
5-8 December 2009. Negombo, Sri Lanka

## LIRNEasia research makes it to the US House of Representatives and Canadian Parliament

LIRNEasia's research on Universal Service Obligation (USO) policy, conducted by Senior Research Fellow, Payal Malik, and Consultant Lead Economist, Harsha de Silva, was cited in a presentation made to the US House of Representatives' House Committee on Energy and Commerce's Subcommittee on Communications, Technology, and the Internet, in March 2009. The paper, entitled, "Using competitive bidding to reform the universal service high cost fund", cited LIRNEasia's analysis of similar auctions conducted in India and other countries. LIRNEasia examined India's subsidy mechanism for expanding rural telephony through two instruments, a universal service fund and an access deficit charge. More on LIRNEasia's case study of USO policy in India is available at <http://tiny.cc/3135c>.

Similarly, LIRNEasia work on ICTs and agricultural markets in the South Asian region was included by the Canadian Minister of International Cooperation in his annual report to the Canadian Parliament on Canada's official assistance for 2008-2009. The relevant excerpt is included below.

### *Mobile phones connect poor farmers to small markets*

*IDRC-supported research led by LIRNEasia (Learning Initiatives on Reforms for Network Economies, a think-tank based in Colombo, Sri Lanka) is exploring how mobile phones and related technologies can improve the lives of the poor. LIRNEasia researchers completed an extensive study of how 10,000 poor people use information and communication technologies in Bangladesh, India, Pakistan, the Philippines, Sri Lanka, and Thailand. The research results are being applied to help farmers use mobile phones as a tool to get better prices for their produce at markets, for example. This year, the largest mobile phone operator in Sri Lanka will apply findings from the study to get market price information to farmers using text messaging, the Internet, or call centres.*

Summary of the Government of Canada's Official Development Assistance Report for 2008-09, p.17.

*LIRNEasia@5: Research → policy → knowledge-based economies*  
Organized by LIRNEasia  
9-11 December 2009. Colombo, Sri Lanka

*LIRNEasia dissemination event (Bangladesh): Mobile2.0@BOP*  
Organized by LIRNEasia  
28 March 2010. Dhaka, Bangladesh

*LIRNEasia dissemination event (India, Part 2): Mobile2.0@BOP*  
Organized by LIRNEasia  
4-5 March 2010. New Delhi, India

*LIRNEasia dissemination event (Thailand): Mobile2.0@BOP*  
Organized by LIRNEasia  
30 March 2010. Bangkok, Thailand

*ICTs and development: an international workshop for theory, practice and policy*  
Organized by the Indian Institute of Technology (IIT), Delhi  
11-12 March 2010. New Delhi, India

## K2I

*LIRNEasia@5: Research → policy → knowledge-based economies*

Organized by LIRNEasia

9-11 December 2009. Colombo, Sri Lanka.

*International forestry and environment symposium 2009*

Organized by University of Sri Jayawardenepura, Sri Lanka

18-19 December 2010. Colombo, Sri Lanka

*International symposium on innovation and development*

Organized by WITS University

24-26 February 2010. Johannesburg, South Africa

## RTBP

*Connectivity and convergence: alternative regulatory strategies for telecommunications*

Organized by LIRNE.NET and the Graduate School of Business at the University of Cape Town

14-17 April 2009. Cape Town, South Africa

*International conference on information and communication technologies and development (ICTD)*

Organized by Carnegie Mellon University (CMU)/TechBridgeWorld

17-19 April 2009. Doha, Qatar

*Introduction to T-Cube*

Organized by LIRNEasia and the Sarvodaya Community Disaster Management Center, Moratuwa

21 April 2009. Moratuwa, Sri Lanka

*Machine learning in support of biomedical security*

Organized by the University of Colombo

23 April 2009. Colombo, Sri Lanka

*eAsia*

Organized by the Centre for Science, Development and Media Studies (CSDMS) and Information and Communication Tech-

## Incentives, not intervention: LIRNEasia Chair and CEO at Harvard Forum II



**Seated left to right:** Amartya Sen, Harvard University; Michael Spence, Stanford University; Clotilde Fonseca, Omar Dengo Foundation and Yochai Benkler, Harvard University at the conclusion of Harvard Forum II

LIRNEasia Chair and CEO, Rohan Samarajiva participated in the second Harvard Forum on "Connection and human development" in September 2009, at Harvard University, USA.

Harvard Forum II was convened by Nobel Laureates Amartya Sen and Michael Spence, in collaboration with Randy Spence and the International Development Research Centre. Its aim was to bring together leading thinkers in the area of development to discuss how ICTs could contribute to poverty reduction in developing countries, both now and in the future. It was a follow-up to the Harvard Forum I held in 2003, where several needs in the ICT for development (ICT4D) area were identified (including ICT governance and regulatory reform, especially in the telecommunication sector). One of the outcomes of Harvard Forum I was the funding of organizations such as LIRNEasia that seek to remove policy and regulatory barriers to the use of ICTs. This time, the focus was on "what next?". Implicit was the question of whether such organizations need to shift their focus to applications, since the access problem has been more or less solved. One of the key takeaways was the need to concentrate on incentives, rather than on interventions.

nology Agency (ICTA)

2-4 December 2009. Colombo, Sri Lanka

*Lecture on data mining and applications*

Organized by the University of Peradeniya

21 December 2009. Peradeniya, Sri Lanka

*7th Indian Association for Social Sciences and Health (IASSH) conference*

Organized by the Banaras Hindu University

5-7 March 2010. Varanasi, UP, India

*2010 international symposium on medical informatics and communications technology (ISMICT)*

Organized by the ISMICT Secretariat

22-25 March 2010 Taipei, Taiwan

## HazInfo

*Mobile communication and social policy*

Organized by Rutgers University

9-11 October 2009. New Brunswick, USA

*LIRNEasia@5: Research → policy → knowledge-based economies*

Organized by LIRNEasia

9-11 December 2009. Colombo, Sri Lanka

**Universal service: India case study**  
*Connectivity and convergence: alternative regulatory strategies for telecommunications*

Organized by LIRNE.NET and the University of Cape Town  
14-17 April 2009. Cape Town, South Africa

**IDRC Pan Asia Networking (PAN)-all partners' conference**

Organized by the International Development Research Centre (IDRC)  
12-14 June 2009. Penang, Malaysia

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**CPRsouth**

*Development of evaluation capacity in ICT4D (DEC) meeting*

Organized by the International Development Research Centre (IDRC)  
11 June 2009. Penang, Malaysia

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**General**

*Sanvada on the impact of the new electricity act and regulatory challenges*

Organized by the Pathfinder Foundation  
13 May 2009. Colombo, Sri Lanka

*The 59th annual conference of the International Communication Association (ICA)*

Organized by the ICA Secretariat  
21-25 May 2009. Chicago, USA

*Roundtable on SAFTA: prospects and opportunities for trade in services*

Organized by the SAARC Chamber of Commerce and Industry  
24 June 2009. Thimphu, Bhutan

*Seminar on the draft national transport policy of the Ministry of Transport*

Organized by the Pathfinder Foundation and the Chartered Institute of Logistics and Transport  
23 July 2009. Colombo, Sri Lanka

*International conference on building a local government alliance for disaster risk reduction*

Organized by the Incheon Metropolitan City and the United Nations International Strategy for Disaster Reduction Secretariat (UNISDR)

11-13 August 2009. Incheon, Korea

*Harvard Forum II: ICTs, human development, growth and poverty reduction*

Organized by Harvard University and the International Development Research Centre (IDRC)  
23-24 September 2009. Boston, USA

*Invited talk at the Center for Policy Research, India*

Organized by the Center for Policy Research, India  
11 March 2010. New Delhi, India

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**Internal meetings**

**Research meetings**

*Research proposal planning meeting for 2010-12*

10 July 2009. Kukule Ganga, Sri Lanka

*Small and medium enterprises (SME) survey discussion*

26 November 2009. Colombo, Sri Lanka

*Brainstorming meeting on mobile money*

9 March 2010. Colombo Sri Lanka

**Colloquia**

*Broadband quality war: are you a winner or a loser?* Chanuka Wategama, 28 April 2009

*CellBazaar, a mobile-based e-marketplace: Success factors and potential for expansion*, Rohan Samarajiva, Ayesha Zainudeen and Nirmali Sivapragasam, 12 May 2009

*Social influence in mobile phone adoption: evidence from the bottom of the pyramid in emerging Asia*, Harsha de Silva and Nishantha Hewavithana, 13 May 2009

*The future of community-based hazard information systems: insights from the Internet-sharing economy*, Gordon Gow, 17 June 2009

*Mobile 2.0: mobile money for the unbanked*, Erwin Alampay, 30 June 2009

*Mobile 2.0: an evaluation of different models for the issuance of licenses for service provision and frequencies*, Payal Malik, 9 July 2009

*Mobile 2.0: business models for delivering mobile value-added services - the case of BuzzCity in Thailand*, Puree Sirasoonporn, 13 July 2009

*Mobile 2.0: freedom of expression in mobile content: Pakistan*, Hina Sarfaraz, 22 July 2009

*Telecommunication regulation in m-banking*, Erwin Alampay, 30 July 2009

*Evaluation basics*, Chanuka Wategama, 31 July 2009

*Identifying conditions for delivery of successful m-government services to the bottom of the pyramid (BOP) in India*, S.C. Bhatnagar, 7 August 2009

*Challenges for the new millennium: demographic perspectives*, Indralal De Silva, 8 September 2009

*Prospects of a volunteer computing model in performance data gathering for broadband policy formulation*, Chanuka Wategama and Nilusha Kapugama, 16 September 2009

*Towards a knowledge-based economy: an analysis of small and medium enterprises (SMEs) in Sri Lanka, India and Bangladesh*, Pratchi Joshi, 2 October 2009

*Indicators to measure a knowledge-based economy*, Aileen Agüero, 5 October 2009

## LIRNEasia research papers on SSRN

In January 2010, over 40 LIRNEasia research papers and reports from 2004 onwards were uploaded to the Social Science Research Network (SSRN) website. Hosting the papers on SSRN has enabled LIRNEasia to extend its presence on the Web by making past and current research more accessible. The table below lists the most downloaded papers on SSRN as of 30 June 2010, and corresponding abstract view counts. LIRNEasia's paper on *Telecom Regulatory and Policy Environment in Indonesia: results and Analysis of the 2008 TRE Survey* also appeared on SSRN's top ten download list for Emerging Markets: Economics (Editor's Choice) e-Journal in May 2010.

**Table 8:** LIRNEasia's top 13 downloaded papers on SSRN, as at 30 June 2010

Title of paper	Author(s)	Paper downloads	Abstract views
Measuring effectiveness of telecom regulation using perception surveys	H. Galpaya and R. Samarajiva	33	89
How the developing world may participate in the global Internet economy: innovation driven by competition	R. Samarajiva	31	106
Mobile banking, mobile money and telecommunication regulations	E. Alampay	27	41
Telecom regulatory and policy environment in India: results and analysis of the 2008 TRE survey	P. Malik	26	70
Teleuse on a shoestring: poverty reduction through telecom access at the bottom of the pyramid	H. de Silva and A. Zainudeen	23	68
Social influence in mobile phone adoption: evidence from the bottom of pyramid in emerging Asia	H. de Silva, D. Ratnadiwakara and A. Zainudeen	22	53
Telecom regulatory and policy environment in Pakistan: results of the 2008 TRE survey	J. Wilson	20	76
Liberalizing the telecommunications sector: making Pakistan an information economy	J. Wilson	17	46
Telecom regulatory and policy environment in Indonesia: results and analysis of the 2008 TRE survey	C. Wattegama, J. Soehardjo and N. Kapugama	16	74
Who's got the phone? The gendered use of telephones at the bottom of the pyramid	A. Zainudeen, T. Iqbal, R. Samarajiva and D. Ratnadiwakara	14	43
Telecom regulatory and policy environment in Thailand: results and analysis of the 2008 TRE survey	D. Nikomborirak and S. Cheevasittayanon	12	37
National early warning system: Sri Lanka - a participatory concept paper for the design of an effective all-hazard public warning system	R. Samarajiva, M. Knight-John, P. Anderson and A. Zainudeen	12	45
Telecom use on a shoestring: strategic use of telecom services by the financially constrained in South Asia	A. Zainudeen, R. Samarajiva and A. Abey Suriya	12	40

*Innovation systems in agriculture: Sri Lankan perspectives*, Seetha I. Wickremasinghe, 6 October 2009

*Mobile 2.0: mobile number portability in emerging South Asia*, Tahani Iqbal, 7 October 2009

*Implementing inclusive ICTs: mobile cell broadcasting for public warning and commercial use*, Natasha Udu-gama, 13 October 2009

*Towards a knowledge-based economy: agriculture and the ITS sector in Bangladesh, India, the Philippines and Sri Lanka - Part 2*, Pratchi Joshi, 13 November 2009

*Classifying universities in developing countries*, Il-haam Petersen, 24 November 2009

*Bottom of the pyramid expenditure patterns on mobile phone services in selected emerging Asian countries*, Harsha de Silva and Aileen Agüero, 25 November, 2009

*The future of the public phone: findings from a six-country Asian study on telecom use at the BOP*, Nirmali Sivapragasam, 30 November 2009

*Empowering market players through ICTs*, Shazna Zuhyle, 3 February 2010

*Green ICT: asking the right questions*, Nalaka Gunawardene, 4 March 2010

## Research outputs

### Book chapters and journal articles

Samarajiva, R. (2009). How the developing world may participate in the global Internet economy: innovation driven by competition. In *ICTs for development improving policy coherence* (p. 75-118). Paris: OECD.

Samarajiva, R. & Iqbal, T. (2009). Banded forbearance: a new approach to price regulation in partially liberalized telecom

markets. *International Journal of Regulation and Governance*. 9(1), 19-40.

Samarajiva, R. & Waidyanatha, N. (2009). Two complementary mobile technologies for disaster warning. *Info*. 11 (2), 58-65.

Gow, G. & Waidyanatha, N. (2010). Using common alerting protocol to support a real-time bio-surveillance program in Sri Lanka and India. In T. Kass-Hout, & X. Zhang, X (Eds.), *Bio-surveillance: methods and case studies* (p. 268-288). Boca Raton, FL: Taylor & Francis.

Prashant, S. & Waidyanatha, N. (2010). User requirements towards a bio-surveillance program. In T. Kass-Hout & X. Zhang (Eds.), *Bio-surveillance: methods and case studies* (p. 240-263). Boca Raton, FL: Taylor & Francis.

Sampath, W., Waidyanatha, N., Ariyaratne, V., Ratnayake, R., Hemachandra, P., & Edirisinghe, E. (2010). Real-time bio-surveillance pilot program. *Sri Lanka Journal of Bio-Medical Informatics 2010*, 1(3), 139-154.

Waidyanatha, N. (2010). Towards a typology of integrated functional early warning systems. *International Journal of Critical Infrastructures 2010*, 6 (1), 31 – 51.

### Conference proceedings

Agüero, A., & de Silva, H. (2009). Bottom of the pyramid expenditure patterns on mobile phone services in selected emerging Asian countries. *Proceedings of the 4<sup>th</sup> Communication Policy Research south (CPRsouth4) conference, Negombo, Sri Lanka*.

Alampay, E., & Bala, G. (2009). Mobile 2.0: m-money for the BOP in the Philippines. *Proceedings of the International conference on mobile communication and social policy, New Brunswick, USA*.

Dubrawski, A., Ganesan, M., Gow, G., Sabhnani, M., Waidyanatha, N., & Weerakoon, P. (2009). Real-time bio-surveillance

pilot in India and Sri Lanka. *Proceedings of eAsia 2009, Colombo, Sri Lanka*.

Dubrawski, A., Sabhnani, M., & Waidyanatha, N. (2009). T-Cube web interface for real-time bio-surveillance program in Sri Lanka. *Proceedings of the 8<sup>th</sup> International Society for Disease Surveillance (ISDS) Conference, Las Vegas, USA*.

Galpaya, H., & Samarajiva, R. (2009). Measuring effectiveness of regulation using perception surveys. *Proceedings of the 4<sup>th</sup> regional conference of the International Telecommunications Society (ITS), Perth, Australia*.

Ganesan, M., Prashant, S., Janakiraman, N., & Waidyanatha, N. (2009). Real-time bio-surveillance program: field experience from Tamil Nadu, India. *Proceedings of the 7<sup>th</sup> Indian association for social science and health (IASSH) conference, Varanasi, India*.

Kumara, W. G. A. S., Gamage, S. N., & Bandara N. J. G. J. (2009). Adaptation of different composting techniques by local government Authorities (LGAs); case of solid waste management sector in Sabaragamuwa, Central, North Central, North Western and Western Province of Sri Lanka. *Proceedings of the International forestry and environment symposium 2009: The Department of Forestry and Environment Science, University of Sri Jayawardenapura, Sri Lanka, 13*.

Kumara, W. G. A. S., De Silva, W. S. S., & Gunathilake, M. K. C. G. (2009). Waste composition analysis to estimate the prevalence of recyclables to develop a conceptual framework of waste to money in Kirulapone division, Colombo municipal area. *Proceedings of the international forestry and environment symposium 2009: The Department of Forestry and Environment Science, University of Sri Jayawardenapura, Sri Lanka, 14*.

de Silva, H., Ratnadiwakara, D., & Zainudeen, A. (2009). Social influence in mobile phone adoption: evidence from the

bottom of the pyramid in emerging Asia. *Proceedings of the Mobile 2.0: Beyond voice? Pre-conference of the International Communication Association (ICA), Chicago, USA.*

Sivapragasam, N. (2009). The future of the public phone: findings from a six-country Asian study of telecom use at the BOP. *Proceedings of the 4<sup>th</sup> Communication Policy Research south (CPRsouth4) conference, Negombo, Sri Lanka.*

Wattegama, C., & Kapugama, N. (2009). Prospects of a volunteer computing model in performance data gathering for broadband policy formulation: a case study from South Asia. *Paper presented at an Experts' workshop: Beyond broadband access: Data-based information policy for a new administration, Fairfax, USA.*

Kannan, T., Sheebha, R., Vincy, P., & Waidyanatha, N. (2010). Robustness of the mHealthSurvey MIDlet for real-time bio-surveillance, intelligent mobile computing for better medical services. *Proceedings of the 4th International symposium on medical information and communication technology (ISMICT 10), Taipei, Taiwan.*

### Research papers

CKS Consulting (2009). *Teleuse@BOP3: a qualitative study.*

Bhatnagar, S. (2009). *Exploring conditions for delivery of successful m-government services to the bottom of the pyramid (BOP) in India.*

Gonsalves, T.A., & Bharadwaj, A. (2009). *Comparison of AT-Tester with other popular testers for quality of service experience (QoSE) of the Internet.*

Gow, G., & Waidyanatha, N. (2009). *Mobile phones and the challenge of sustainable early warning systems: reflections on HazInfo Sri Lanka and opportunities for future research.*

Lokanathan, S. (2009). *Telecom regulatory and policy environment in Afghanistan: results and analysis of the 2008 TRE survey.*

Safaraz, H. (2009). *Freedom of expression in mobile content: Pakistan.*

Waidyanatha, N., Kannan, T., Ryer, Sheebar, Pushpa-Marry, V., Prashant, S., Muthiah G., & Gow, G. (2009). *Challenges of operationalizing the real-time bio-surveillance program's mHealthSurvey.*

Uppal, M., & Malik, P. (2009). *An evaluation of different models for the issuance of licenses for service provision and frequencies.*

Alampay, E. (2010). *Mobile banking, mobile money and telecommunication regulations.*

Iqbal, T. (2010). *Mobile number portability in South Asia.*

Lokanathan, S., & de Silva, H. (2010). *Leveraging Mobile 2.0 in India for agricultural market access.*

Ramachander, S. (2010). *The willingness to pay for mobile telephony services among low income households in six countries of Asia.*

de Silva, H. (2010). *The need for an efficient bus and train ticket sale-and-purchase system in Sri Lanka: possibilities for a Mobile 2.0 solution.*

Sirasoontorn, P. (2010). *Economic analysis of business models for delivering mobile value-added services in Thailand.*

Sivapragasam, N., Agüero, A., & de Silva, H. (2010). *The potential for mobile remittances at the bottom of the pyramid: findings from emerging Asia.*

Udu-gama, N. (2010). *Mobile cell broadcasting for commercial use and public warning in the Maldives.*

Zainudeen, A., Samarajiva, R., & Sivapragasam, N. (2010). *CellBazaar, a mobile-based e-marketplace.*

### Policy memos

LIRNEAsia (2010). *Agricultural value-added services (VAS) through Mobile 2.0.*

LIRNEAsia (2010). *Business models for delivering mobile value-added services (VAS) in developing markets.*

LIRNEAsia (2010). *CellBazaar: enabling m-commerce in Bangladesh.*

LIRNEAsia (2010). *Is mGov the way forward?*

LIRNEAsia (2010). *Policy implications of introducing mobile money (m-money) for the BOP.*

LIRNEAsia (2010). *Possibilities for bus tickets to go mobile in Sri Lanka.*

LIRNEAsia (2010). *Spectrum management: unleashing the potential of mobile technologies for the bottom of the pyramid (BOP).*

LIRNEAsia (2010). *To MNP or not: that is the question.*

### News releases

LIRNEAsia (2009, June 28). *Bangladeshi overseas migrants call home more often than other Asian migrants (and pay the most); some domestic migrants use mobiles to remit money to families.*

LIRNEAsia (2009, July 15). *Peace of mind for a tourist paradise.*

LIRNEAsia (2009, November 4). *India broadband users face bottlenecks in accessing international servers.*

LIRNEAsia (2009, November 4). *India's broadband quality: serious mismatches between advertised and delivered.*

LIRNEasia (2009, November 4). *South Asians receive less value for money in broadband quality, shows study.*

LIRNEasia (2009, November 4). *Speed is not everything; broadband users in India suffer even with "fast" links.*

LIRNEasia (2010, March 28). *Mobile number portability is not for Bangladesh's poor.*

LIRNEasia (2010, March 28). *Real potential for m-money in Bangladesh is among poor.*

LIRNEasia (2010, March 30). *BuzzCity in Thailand: ideal mobile social networking model but attracting advertisers a challenge.*

LIRNEasia (2010, March 30). *Thais at the BOP and m-cash: a unique opportunity for m-commerce.*

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### Video

LIRNEasia (2009). *Teleuse@BOP profile: Sayar Singh.* Video available at <http://lirneasia.net/projects/2008-2010/bop-teleuse-3/teleuse3videos/>.

LIRNEasia (2009). *Teleuse@BOP profile: Judy Baltazar.* Video available at <http://lirneasia.net/projects/2008-2010/bop-teleuse-3/teleuse3videos/>.

LIRNEasia (2009). *Teleuse@BOP profile: Chamara Pahalawattage.* Video available at <http://lirneasia.net/projects/2008-2010/bop-teleuse-3/teleuse3videos/>.

LIRNEasia (2009). *Teleuse@BOP profile: Lourdes Casipit.* Video available at <http://lirneasia.net/projects/2008-2010/bop-teleuse-3/teleuse3videos/>.

LIRNEasia (2009). *Teleuse@BOP profile: Kittipong Sangsri.* Video available at <http://lirneasia.net/projects/2008-2010/bop-teleuse-3/teleuse3videos/>.

LIRNEasia (2009). *Teleuse@BOP profile: Pradip Gogoi & Purni Gogoi.* Video available at <http://lirneasia.net/projects/2008-2010/bop-teleuse-3/teleuse3videos/>.

LIRNEasia (2009). *Teleuse@BOP profile: Pradip Soledad Alvis.* Video available at <http://lirneasia.net/projects/2008-2010/bop-teleuse-3/teleuse3videos/>.

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### Other research output

LIRNEasia (2009). *Mobile benchmarks, South Asia, October 2009.*

LIRNEasia (2009). *Mobile benchmarks, Southeast Asia, October 2009.*

LIRNEasia (2009). *Broadband price benchmarks, emerging Asia, October 2009.*

LIRNEasia (2009). *Broadband quality of service experience (QoSE) benchmarks, emerging Asia, October 2009.*

LIRNEasia (2009). *International roaming benchmarks, South Asia, October 2009.*

LIRNEasia (2009). *International voice benchmarks, South Asia, October 2009.*

LIRNEasia (2010). *Mobile benchmarks, South Asia, February 2010.*

LIRNEasia (2010). *Mobile benchmarks, Southeast Asia, February 2010.*

LIRNEasia (2010). *Broadband price benchmarks, emerging Asia, February 2010.*

LIRNEasia (2010). *International roaming benchmarks, South Asia, February 2010.*

LIRNEasia (2010). *International voice benchmarks, South Asia, February 2010.*

Figure 23: World map of LIRNEasia-organized and invited events

