Internet content and services development in Indonesia

1. Internet content in the Indonesian language is growing rapidly even though there is still much more Indonesian URLs in English. In 2003 the number of URLs with content in Indonesian was as follows:

- Technology related: 2.7 million URLs (about 53% increase from 2002);
- News and current affairs: 2.5 million URLs (about 68% increase);
- Industry/business: 1.9 million URLs (about 76% increase);
- Civil society with 1.7 million URLs (about 66% increase);
- Education: 1.6 million URLs (about 36% increase);
- Culture/literature: 1.5 million URLs (about 38% increase);
- Government: 1.5 million URLs (43% increase);
- Health/nutrition: 1.2 million URLs (58% increase);
- Commerce/tourism: 1.2 million URLs (76% increase);
- Rural development: 870 thousand URLs (67% increase);
- Political groupings: 770 thousand URLs (81% increase);
- Agriculture: 404 thousand URLs (67% increase);
- Non-government organization: 310 thousand URLs (34% increase) (Purbo, 2003).

2. Some of these sites are potentially useful for rural populations, in particular, technology, education, government information, health and nutrition, rural development, agriculture and NGOs.

3. The following free information services developed by community initiatives with minimum support from government and ISPs may also be of relevance to the rural population.

- www.groups.or.id, it is a free mailing-list service supported by Indonesian ISPs. The community mainly funds the servers. In March 2004, it serves 2500+ mailing list with 65,000+ subscribes. Some of these lists are dealing with subjects of relevance to rural populations and could be used to exchange, for example, price information.
- www.voipmerdeka.net, is a “rebel net” that offers free VoIP for Indonesians. The VoIP Merdeka, created in 2003 in reaction to the Government’s plan to raise the telephone tariffs, is one of the largest free VoIP network in the world today with more than 200 gatekeepers in the network (Purbo, 2003).

4. Below are some further examples of existing content and services of relevance to rural populations.

A.1. Government-on-line

5. There are several projects aiming at introducing ICT to improve efficiency and delivery of government’s services – Government-on-line (see
http://www.indonesia.go.id/). Government agencies at central, provincial and district level are now increasingly using Internet (Akman & Idris, 2003).

6. Of particular interest is the so called “One Roof” Management Information System (SIMTAP) developed by Optima Software, Bandung, (contracted by P.T. Telkom, with funds from the World Bank), initially for one district but now in use in several Kabupaten. SIMTAP is Telecom’s brand name for a 12-modules web-enabled Government-on-Line system which allows citizens to obtain a number of ICT-based services, such as permits/licenses, registration of companies and property, ID-cards, birth and death certificates.

7. Presently these services operate on a LAN and are only available in one locality. It could easily be modified to allow for access from anywhere over the Internet. However, due to the lack of public facilities to access the Internet, it seems that this has not yet been implemented, which considerably reduces the potential benefits of the system.

8. Telecom charges some US$ 25,000 for the modules, including training of the staff who will administer the system. Even in its present limited application the SIMTAP has achieved significant savings for the Kabupaten who have acquired the system, so it would seem to be a good investment for all Kabupaten, who can afford it.

9. A further development of this SW, consisting of 30 modules, is marketed by Optima under the proprietary name UP2T and was used in 14 government agencies in 2002.

10. The information and service provided at government websites are usually static, limited to statistics and information about organization, projects and achievements which is not perceived as particularly useful for people in rural areas. One survey of use of ICT among SMEs also concludes that even among those few SME exporters, who have access to Internet only a small portion ever visited the National Export Development Agency – Badan Pengembangan Ekspor Nasional (BPEN) and the Ministry of Industry and Trade (Depperindag) web pages (Suradhinata, 2001).

11. To increase the use of government websites it is recommended that the use of telecenters (at least in one of the regions selected for the present project) for delivery of the services offered through SIMTAP should be piloted in the present project and the potential benefits carefully evaluated.

12. It is further proposed that the use of Geographic Information Systems (GIS) SW for participatory planning be explored and tested within the framework of the project. Information about GIS in English and free GIS resources are available at http://www.gis.com/.

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1 KGRIP E-Government Case Study, Kabupaten Takalar, 2002 – see also www.takalar.go.id
2 Idem
13. There will be other needs for vocational training among the populations in the selected sites, which should be identified in the in-depth needs assessment and baseline evaluation to be carried out at the outset of the proposed project. Again, some potentially relevant material has been developed in Indonesian, for example by the Ministry of Research and Technology (RISTEK) in collaboration with LIPI and various R&D institutes. A lot of relevant training material as well as operational manuals for MCT staff are available in English through the Internet but would need adaptation and translation.

14. For use in the WARINTEK program, RISTEK has produced 2 CD-ROMs with information regarding appropriate technology, agriculture, animal husbandry, fisheries, food technology, water treatment, water pumping technologies, sanitary technologies, and agricultural instruments medical plants, traditional medicine, food recipes and food security. Another 6 CD ROMs have been produced to contain bibliographic information (meta data) from more than 60 leading libraries in Indonesia, and more than one million informative data are also recorded. These CD-ROMs contain information in the form of animation on Science & Technology suitable also for children use. Most of this freely available content, produced for the WARINTEKs, is relevant for rural population.

15. National Scientific Documentation and Information Center (PDII-LIPI) has produced CD-ROMs with databases (bibliographies) on Indonesian patent document and on “Indonesian scientific articles, which may be useful also for rural populations.

16. The Center for Information Technology in Education – PUSTEKKOM has pioneered use of ICT in education and produces a variety of ICT-based course materials. These materials still make use of traditional printed and audio-video media but production of web-based material is now started. PUSTEKKOM cooperates with the Indonesia Digital Library Network (see http://idln.lib.itb.ac.id/) and Global Distance Education Network (GDENet – see www.col.org/disted/) as well as with Southeast Asian Ministers of Education Organization Regional Open Learning Centre (SEAMOLEC).

17. The target audience is chiefly, but not exclusively, primary school and secondary school children and teachers. There are some 2000 schools in Indonesia, which use this material for junior high school programs.

18. PUSTEKKOM has now started the open learning system for junior secondary schools (SMP Terbuka) in rural areas, where students, who are unable to attend regular school hours, go to Community Learning Centers (Pusat Kegiatan Belajar Masyarakat). Telecenters could complement such facilities and make use of the ICT-based resources provided in this program.

19. Universities and vocational training schools have introduced ICT related programs, whereas computers in schools are still very rare, in spite of the “School 2000” program, which had set a target that 2000 schools should have been connected to the Internet already in the year 2000. This program, initiated by the Association of Internet Service Providers (APJII) in 1999, unfortunately did not reach its target and seems to have lost its momentum. Another initiative called IBM KidSmart Early Learning
IB7200 Connectivity VT2007

Program was initiated by IBM (UNDP-1, 2004).

20. The WSIS award winning www.ilmukomputer.com, with more than 500 publications, tutorials and articles is one of the best Indonesian distance education & e-learning site on computer knowledge. The 26 staff strong organization also distribute the content through CD-ROMs (Purbo, 2003, UNDP-1, 2004).

21. The University of Indonesia (UI – see www.ui.ac.id) is the centre for the Global Distance Learning Network in Indonesia. The World Bank has supported this with US$ 2 million for the development of a variety of distance learning material and activities also supported development of distance learning.

22. The Open Learning University (Universitas Terbuka) has for a long time offered distance learning courses based on traditional media (video, printed material as well as radio and TV programs) but has recently started to use the internet for delivery of tutorials, homework and various administrative services (see www.ut.ac.id). Of particular relevance for the telecenter project is their program for teacher training.

23. Another on-line resource is the Indonesian Digital Library Network (see http://idln.lib.itb.ac.id), which was developed with grants from International Development Research Centre (IDRC), Canada and the Indonesian Foundation for Telecommunication and Information Research (YLTI). The network of 25 Indonesian libraries offers access to a bibliographic database of current research papers, theses and dissertations. This repository may also include some scientific studies of relevance to rural populations or extension workers (e.g. on new technologies in agriculture, fishery and husbandry, food processing, health issues, etc.).

24. As shown above, some training and learning resources are available in Indonesian through the Internet and on CD-ROM. However, many more such resources are needed and it is proposed that the project should allocate some funds to the development of additional learning resources and adaptation/translation of existing resources to the needs of the rural populations.

A.3. Health information

25. Experts estimate that to date, there are 90,000 to 130,000 Indonesians living with HIV and around 20,000 women die in Indonesia each year from causes related to childbirth. (HDR 2004).

26. The Ministry of Health has a web-site (www.depkes.go.id) and there is a “health news portal” (www.health-indonesia.com) with some content which may be of interest to rural populations but there seem to be no other sites with useful health information in Indonesian. It is recommended that the project support development/adaptation/translation of ICT-based content related to health issues such as maternity and child care, healthy food and living, HIV/AIDS prevention, etc. for the rural population in collaboration with the Ministry of Health.
A.4. Information about micro-finance

27. In 1998 eighty five percent of the SMEs had “no loan facility” (Timberg, 1999). The Bank Rakyat Indonesia (BRI) comprises the largest microfinance system in Indonesia, with nearly 4,000 offices in sub-district all over Indonesia, and accounts for the major share of rural deposits in terms of volume (74 percent) and accounts (62 percent). Information about the bank and micro-credit opportunities is available at http://www.bri.co.id.

28. The People’s Credit Banks (BPR), with about 2,200 offices at district level, is the second largest group accounting for 19 percent of the deposit volume (see www.mixmarket.org/en/demand/demand.show.profile.asp?ett=1271&)

29. In addition, there exists a large number of non-bank microfinance institutions, such as the Badan Kredit Desa (BKD) and the Rural Fund & Credit Institutions (LDKP). There are also various saving/loan cooperatives (e.g. the women’s cooperative Inkowan/Puskowan), which do not yet have any presence on the Internet.

A.5. ICT-based content and services for farmers

30. At present there are no corresponding services for Indonesian farmers. Agritani (see section H1 below), has the ambition to set up an on-line service to help farmers (and buyers of their products) to get better prices and to improve their productivity and terms of trade but their website (www.agritani-hub.com) does not yet offer services on-line.

31. It also has some useful links, e.g. to its partners and to the website www.riceonline.com, which provides current prices on rice in the US and some Asian countries on line. Among the partners are banks, the Indonesian Institute of Science (LIPI) and companies dealing with logistics. The Ministry of Agriculture (another partner), has a website, www.deptan.go.id, with agriculture statistics on export & import, land usage, etc. as well as information about regulations, technologies, production, processing and marketing, R&D in this field, etc. Some of the information available on the partners’ web sites is possibly relevant to small scale farmers but more work is needed to develop relevant services in this field.

32. What seems to be needed by small scale farmers is something along the lines of the very successful e-Chopal model developed by ITC in India. Through an IT network, maintained by the e-Chopal, farmers can access daily closing prices on local markets, track global price trends, information about new farming techniques, equipment, seeds and fertilizers and about possibilities of micro-finance, either directly, or through an intermediary, the sanchalak, who has the computer at his home. They can also order such products and consumer goods from ITC or its partners at bargain prices because the sanchalak aggregates the village demand.

33. ITC offers to buy the crop directly from any farmer at the previous day’s closing price; the farmer then transports his crop to an ITC processing center, where the crop is weighed electronically and assessed for quality. The farmer is then paid for the crop and a transport fee (see www.digitaldividend.org/case/case_echoupal.htm).
34. Prices of agricultural products fluctuate very much and, whereas the government collects and broadcasts historical price information, current price information is not yet timely available.

35. An interesting system, called LAWANGTANI, which, at present, only exists in prototype, provides current price information through SMS on cell phones and Internet. LAWANGTANI uses wireless networks combined with Internet technologies to make available to farmers information that is (almost) real-time, collected by agents and transmitted by SMS on cell phones. This information is stored in a server, which could also be accessed through the Internet in a MCT, for example.

36. In Indonesia there is not at present any large organization that plays the role ICT plays in India. Farmers and SMEs need to get organized in cooperatives or federations to aggregate their offer and demand for inputs but they also need some help to extend their markets and negotiate deals with companies handling storage (warehouses), transport, taxes and customs (if exporting), etc. to extend their markets.

37. It is recommended that the Farmers Federation in Salatiga and the women’s cooperative be encouraged, with some initial support from the project, to collaborate with Agritani and other potential partners (e.g. the Ministry of Agriculture and the developer of LAWANGTANI) in the development of the services needed by small farmers and other cooperatives to extend their markets and improve their better terms of trade.