Onno the Liberator

Richard Fuchs

"'It' is liberated!"

These are Onno Purbo's first words to me in more than a year. "It never would have been liberated without the International Development Research Centre (IDRC)."

The "it" he is referring to is the 2.4 MHZ spectrum. The spectrum, often referred to as the "last mile," provides wireless access to data and voice communications in the places telephone lines have yet to reach.

For the past decade, Onno Purbo has tirelessly promoted the use of wireless fidelity, or "Wi-Fi," Internet connections that rely on radio waves. Working with a broad coalition of Indonesian telecentres, or Wartels, cybercafes, and Internet activists loosely assembled in a movement known as RebelNet, Purbo has been pushing the Indonesian government to allow unlicensed and unregulated use of the spectrum and to promote rather than discourage the diffusion of new technologies.

The turning point in their struggle came on 5 January 2005 when the new Indonesian government declared the 2.4 MHZ spectrum free for unlicensed and unregulated use. Purbo, not one to award plaudits gratuitously, credits this shift in policy to IDRC's support of his work promoting community-based ICT infrastructure and knowledge sharing.

Extending access

The 2.4 MHZ spectrum had been liberated and Onno Purbo is its acknowledged liberator. During his efforts to extend Internet access in Indonesia, Purbo attracted celebrity status within Indonesia as an Internet champion. In the late 1990s, he served as a Presidential advisor on a blue ribbon
panel that produced a forward-looking report, *Nusantara*, or Archipelago 21. However, as Purbo recalls, "at that time I didn't have any mass."

Realizing that the recommendations contained within the report were being used to leverage grants for large public bureaucracies instead of leading to change, Purbo quit his comfortable teaching job as an engineering professor at Indonesia's leading technology university, the Institute of Technology Bandung, and became a spokesperson and lightening rod for an emerging movement urging Indonesians to become, in his words, "knowledge producers."

Such activism appears to be a family trait. A generation earlier, Purbo's father had led the Indonesian movement to introduce environmental stewardship and sustainable community development.

Leaving behind his role as mild-mannered engineering professor, Purbo's new business cards read "*Works for the People of Indonesia.*" In following this new path, he helped to crystallize an entire movement advocating alternate, cheaper, and more open sharing of information and technology in this tropical country of 17 000 islands and 230 million people.

Purbo held workshops and seminars throughout the country, training people on how to build and use low cost technology. In hotel conference rooms, universities, and schools, Purbo taught thousands of Indonesians how to build their own Wi-Fi systems. For a nominal fee, participants also have access to Purbo's Web site and his 40 published works and more than 1 000 Yahoo groups. Purbo believes that information should be freely shared; his works are not under copyright. "Initiatives in ICT development need to be self-financing, community-based, and sustainable."

### Removing constraints

Purbo's simple question,"why can't the people of Indonesia use the 2.4 MHZ spectrum?" brought him and the RebelNet movement into direct opposition with the government's regulating and licensing authority. The national telephone company and the Ministry of Transport and Communications offered all sorts of reasons why such use was prohibited. None were acceptable to Purbo and his growing movement. Their efforts to democratize what the telecom demagogues controlled became a "virtual" storming of the Bastille.

Leading the charge hasn't been easy. The movement has endured threats from incumbent politicians and public officials. Indonesian authorities seized equipment Purbo had installed to support educational and community WiFi access. Friends and colleagues were jailed. Purbo's family's celebrity spared him that fate, but only just.

### Knowledge leads to policy change

Onno Purbo insists his time at IDRC as a Research Fellow was the lever that led to the actual policy change. In his words, "I had the knowledge but IDRC elevated the value of my knowledge." He spent 2003 working with IDRC's *ICTs for Development program*, meeting policymakers in South Africa, Bangladesh, Canada, India, and Europe to discuss Wi-Fi as an inexpensive technology and ICTs as tools for development. He participated in the IDRC-supported *Harvard Forum Dialogue* on ICTs and Poverty in September 2003 and was catapulted to centre-stage at the World Summit on the Information Society in Geneva in December 2003.
News trickled back home about this celebrated Indonesian "digital divide" champion. Diminutive in stature but gargantuan in energy and knowledge, Onno Purbo had taken his home-game on the road. His international audiences supported his message, admired him, and wanted him to succeed. The former engineering professor turned local digital activist, was becoming an internationally recognized liberation technologist.

In addition to authoring several books, giving countless workshops on wireless Internet access, and mentoring a new generation of aspiring Internet liberators around the world, one of Purbo's last acts at IDRC was an address in the spring of 2004. The event, hosted by the Indonesian Ambassador to Canada and attended by diplomats, local Indonesian community leaders in Canada, and members of the Indonesian media, proved a pivotal turning point in winning the attention of Indonesia's policymakers.

Purbo did interview after interview. By the time the story about liberating wireless Internet access had made its way back to Jakarta, it had grown, bigger, taller, and greater than even he could imagine.

With an election looming and a new president to be installed later in the fall of 2004, policy changes were pledged, with the promise to produce important changes within 100 days of being elected.

On 5 January 2005, almost 100 days into the new government’s mandate, the Minister responsible, M. Hatta Radjasa, issued the new decree. Years of community organizing, combined with an international platform from which to preach and a new regime looking for popular new policies, proved the right ingredients for change.

The new legislation allows high school teachers, university students, and local community activists affordable access to the Internet. The unlicensed spectrum provides for no-cost, wireless transmission over a radius of almost 6 kilometres. Communities and organizations are working to further lower the monthly costs of Internet access points, roughly CA $400. Since the new policy was invoked, more than 1 000 new Internet points of presence have sprouted up in the country every month.

This major success is but one step in the liberation process. For Purbo, the more powerful 5.8 MHZ spectrum is the next challenge. Purbo also wants to boost the total number of Internet users in Indonesia and the quantity of training materials and information available in local languages.

Local governments, aware of all this new activity, are trying to find ways to tax it. In one case, they've levied a tax based on the height of the transmission tower rather than the number of users. Purbo just smiles when he tells this story. He and the millions of RebelNet members know how to build very tiny transmission devices.

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