

Economic development via the Net in Oceania

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The Internet is permeating our lives because of its power. This brings obvious social and economic value. Less obvious are the social and economic hurts.

The Net's reach is global, but Net access is far from global; and as the IT caravan rolls on, stragglers slip further behind. However, the Net is a cheap power just made for isolated people, and thus it offers access to an unprecedented equality of opportunity. Women have equal access. But the already poor do not. Equity here raises questions of human rights, ethics, the professional standing of the computer industry, good business, and development aid.

So the Net can both amplify and bridge the divide between rich and poor. Wealth is a function of relative purchasing power, which itself is a complex product of money and also of how we use it. Left to itself therefore IT makes some people poorer and adds new social tensions.

This paper seeks programs which use the Net as a spearhead to bridge social and economic gaps across the Pacific Islands. It outlines some possibilities and issues, points of UN leadership and UN weaknesses, the major stakeholders, and local priorities. Antipodean Estonia has taken two great steps — a computer for every twenty pupils, and a guarantee of Net access to every citizen. That is a model for isolated South Pacific islands¹.

1 Possibilities

Sustainable development includes the opportunity to participate in economic and social processes, to share their benefits, and reduce disparities in quality of life (UN 1986). Rees & Smith (1998) distinguish economic and human development, defining the latter along the lines of the definition of the UN Development Program [UNDP]: 'a process of enlarging people's choices — mainly access to resources, a long and healthy life, and education. These are like the five Chinese blessings —

health, long life, prosperity, love of virtue, and natural death. According to the annual *Human Development Index* (UNDP), the higher a country scores on these indices the higher its human development.

The UN General Assembly adopted a *New Economic Order* in 1974, and tried to describe law for it [Resolution 46/52]. But ancient ethics is slow to pervade the world order (Acquaah-Gaisie 1992). There is a human right to own property: no one shall be arbitrarily deprived of property (*Declaration of Human Rights 1948* article 17). Principled regulation is not arbitrary. But what are the principles? Pope Paul 6 (1967) put a socialist, welfare or development ethic — the idea of human solidarity:

Private property does not constitute for anyone an absolute and unconditioned right. The right to property must never be exercised to the detriment of the common good. If there should arise a conflict between acquired private rights and primary community exigencies, it is the responsibility of public authorities to look for a solution, with the active participation of individuals and social groups.

On contractual justice the encyclical said:

If the positions of the contracting parties are too unequal, the consent of the parties does not suffice to guarantee the justice of their contract, and the rule of free agreement remains subservient to the demands of the natural law. What was true of the just wage for the individual is also true of international contracts: an economy of exchange can no longer be based solely on the law of free competition, a law which, in its turn, too often creates an economic dictatorship. Freedom of trade is fair only if it is subject to the demands of social justice.

The Net fosters global development in several ways: —

1.1. The Net brings the world together

The Net's global reach dissolves time and distance. Immediacy of communication also gives us a new regard for the efficiency and quality of programs, and of writing generally. People interact easily in the global village. By pairing different traditions, we discover common values. Gutenberg's printing press speeded publication in the vernacular and supported the Reformation; the Net exposes the heresies of a chosen race and other divisive tribal dogmas. Rupert Murdoch said that it subverts dictatorships

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and spreads democracy. With today's ethnic murders in the Pacific islands, the Net can exchange ideas and sharpen inter-cultural dialogue so that we savour differences and do not fear them. It may inject a productive discipline into the sterile double-negatives of the UN *Declaration on the Elimination of Intolerance & Discrimination based on Religion or Belief* 1981.

We increasingly pool plans and resources now. Cyber users have the skills; and those without them will slip behind. Caring teachers will never be obsolete, but some of their old ways will become so, as tuition comes online.

1.1 The Net for education & research

The Net delivers vast funds of data to and from our fingertips; it is cheaper than books, though we still like hard copy of many documents. People who cannot attend classes because of commitments or poverty can connect to university courses and lecturers from home. Knowledge lifts people's confidence and ability to interact with others and to assert their rights. So the Net empowers its users, giving them an edge over others. It increases their wealth, reducing non-users' wealth relatively until we guide the new technology by the old canons of social justice. Only by massively facilitating access can we span the gap between poor and rich. Bill Gates has given \$US17b to a foundation for global health and learning. The best returns on this investment will come from educating the most needy: it will lift their self-esteem, vocational and avocational options, and their stake in society. The Victoria government is upgrading regional telecommunications infrastructure to cut phone and Internet costs by up to 70%; and is setting up Internet cafés in regional schools to give IT access to rural communities.

1.2 The Net for recreation

Online games, music, videos, news, chatrooms, gambling and shopping, enjoyed in the safety of home and during recess at work, enrich these places, and reduce stress. There is some abuse of these facilities, of course. In April 2000, Telstra sacked several staff for watching Net porn in work hours; and children may access adult material on the Net. With webcam, workers can keep an eye on children in daycare centres.

1.3 The Net for work efficiency

Computers do things faster and better, tighten our goals and means, and thus improve the quality and quantity of productivity and social discourse. The Net provides flexible work modes: with phone access, people work from home or office or while travelling. We can enjoy a new solitude and reflection before a PC, while using email to build a closer communal life.

1.4 The Net for job opportunities

IT opens up new occupations, but also costs old jobs. Technology replaces traditional farming and barter economies, and should bear the cost of resulting unemployment as industry wears the cost of workcare. The Net can help the unemployed with online learning, job search databases, and job creation. But the jobless with poor education and resources do not always get to the Net's resources. The US National & Global Information Infrastructure provides open access to the Net to generate opportunities. Governments could combine market incentives and tax credits to spread computer ownership among unemployed, provide free e-mail and fund training programs (Tsvetinov 1999). In Australia the Anglican and Catholic churches and the ACTU offer free Net access to the homeless and disadvantaged at drop-in centres: clients can swap survival tips, learn IT skills, and find a bed for the night.

Protesters against globalisation organise themselves on the Net, a major vehicle for globalisation. Nike attracts cheap labour in Asian countries. Protesters equate profit with greed and exploitation, but it would not help if Nike closed its factories. Unequal working conditions require global regulation. The ILO and ACTU should strengthen all trade unions so that Third World workers get better conditions, and workers here lose fewer jobs. Sustainable development depends on company profits, and sustainable capitalism depends on distributive justice; a productive middle course will design easy, collaborative programs.

1.5 The Net for commerce

The Net can win markets for products and services. Internet capability can catapult even poor, isolated artisans into the heart of the global market, bypassing costly middlemen; it modernises business and government, and multiplies productivity (UNDP 1999b). The Net provides faster means to order and distribute products, to get customer feedback, and to find best prices and best practice. For business interoperability, the United Nations promotes eXML, the eXtensible Markup Language backed by Tim Berners-Lee, who invented the Web.

Since the Net thus generates income and higher living standards, general access will have a multiplier effect beyond its cost. However, multinational companies invest only where communication infrastructure is reliable. So the digital divide is growing, and will exclude the poor even further. E-commerce may become a trade barrier for those not connected; laggard countries may be bypassed, not just marginalised (ECOSOC 2000).

2 Problems

Machines make work easier and also destroy many jobs. The Net carries child pornography, racist propaganda, and recipes for bombs, and is used for money laundering and cyber stalking. Nauru is said to launder Russian Mafia money: the Pacific Islands Forum should regulate that for the good name of the region. The Net's addictive

amusements distract the immature from study and buoyant social contact. Net gambling is seductive, and we should build in warning hurdles and blocks against over-spending. Viruses can damage business and government: one day the Net may be used to shut down a whole economy. Panic about Y2K bugs (a product of unethical marketing?) enriched software programmers. However, the downside is incidental. Net technology makes life easier and richer — for some.

2.1 The digital divide

Few have Net access. UN Secretary Kofi Annan (1999) said:

Information is power—Five billion [people] live in developing countries. For many of them, the great scientific and technical achievements of our era might be taking place on another planet—My fear is that we are adding a new divide to the already well entrenched one between rich and poor: a digital divide between the information rich and information poor.

Globalisation is not new. The International Telecommunications Union was set up in 1865. About 1998, telecommunications changed from a government monopoly to a free market where private and public operators compete. Now fewer than 6% of Net users are in poor regions, which account for 84% of people. 5.9% of Net hosts are in Third World countries: 3.7% Asia-Pacific, 1.9% Latin America & the Caribbean, 0.3% Africa (ITU 1999). Only 4.3% of secure Internet servers (capable of handling encrypted online payments) are located outside the 29 technologically advanced states: that indicates e-commerce capacity. Industrial countries, with only 15% of the world's population, have 88% of Internet users; one quarter of countries have not yet reached a teledensity of one phone line per 100 persons (UNDP 1999a). South Asia constitutes one-fifth of the world's population; but less than 1% of its people have Net access. Africa has 740 million people, but only 14 million phone lines (80% of which are in six countries) and only 1 million Internet users, compared with Britain's 10.5 million. To buy a new computer, the average US citizen spends about a month's salary; the average Bangladeshi must save for eight years. The Net's wholesale pricing model obliges Internet Service Providers to pay for the cost of each end-to-end connection to US Net backbones, even though the traffic is two-way: that disadvantages poor countries. Is that an abuse of power?

80% of people in the world have never even heard a dial tone, let alone surfed the web. This gulf between information haves and have-nots exists within as well as between countries: large pockets of people in industrial countries are information poor. In East Palo Alto, next to Stanford University and the corporate HQ of Yahoo and Oracle, 17% of the people live in poverty, and less than one family in five has a home computer. The charity Plugged-In brings technology resources to poor sections of California (Black 2000).

Telstra commissioned a study by the Australian Council of Social Service and the Telecommunications Law Centre (Given 2000), which found that income is the divider: 70% of people earning more than \$84,000 a year had access, and only 22% of people earning less than \$19,000.

2.2 Roots of imbalance in IT access

The Net began in the West, so these initial imbalances were inevitable. Net access comes through the phone and computers. Globally, however, most people lack money, literacy and computer skills.

Initially the language of Internet discourse was English, which still dominates the web: 80% of websites are in English. Information & Communication Technologies [ICT] use English 58%, Spanish 8.7%, German 8.6%, Japanese 7.9%, and French 3.7%: total 86.9% (Perrot-Lanaud 2000). However, a rapid take-up of the Internet in Asia could shift usage thus:

	<u>Online users</u>	<u>Those using</u> <u>English</u>
2000	300m	60%
2003	1,000m	50%

The Net spreads English as the language of science and communication. However, for two-way communication, content in digitised form should also appear in local languages. That may even be a human right: *Covenant on Civil & Political Rights 1966* [CCPR] article 27. Melbourne IT sells domain names using non-Roman characters. UNESCO and software programmers should devise a script to unify the Latin, Cyrillic, Greek and other similar alphabets: this will make local languages more readily intelligible and thus speed communication. Languages are dying rapidly, and with them valuable cultural diversity; but the more people that can read a language, the longer it will survive. A common script will do more to preserve multilingualism than to destroy it. Mandarin could become the largest language on the Net, and the West should prepare a simpler alternative. It matters little what the world language is; what matters is its efficiency. Keyboards should clearly distinguish the letters l (lower case L) and I (upper case i) and O, on the one hand, from the Arabic numerals for one and zero, on the other hand: that confusion will prove costly one day.

3 UN leadership

A world where a small minority enjoys high living conditions while the large majority is poor gravely hurts the poor and is destabilising for all. Rather than demand democracy at home, the poor migrate illegally to wealthy communities for a better life: not even death or repatriation deters them.

The United Nations is our global forum. It sets standards of ethics or human rights on the matters of global concern. Net access, once a luxury, now ranks in development targets. We may never get universal access; but we can set and

check realistic, caring targets. The *Covenant on Economic, Social & Cultural Rights 1966* article 6 provides for the right to work, article 9 the right to social security, article 11 the right to an adequate and improving standard of living, article 12 a right to the highest attainable standard of health, and article 13 the right to education. CESCR article 15(1) recognises the right of everyone to enjoy the benefits of scientific progress and its applications. The UN *Declaration on the Use of Scientific & Technological Progress in the Interests of Peace & for the Benefit of Mankind 1975* provides:

1. All states shall promote international co-operation to ensure that the results of scientific and technological developments are used in the interests of strengthening peace and security, freedom and independence, economic and social development, and human rights

5. All states shall co-operate in the establishment, strengthening and development of the scientific and technological capacity of developing countries with a view to accelerating the realisation of the social and economic rights of the peoples of those countries.

The UN *Declaration on the Right to Development 1986* [DRD] article 8 provides for equality of opportunity for all in their access to basic resources, education, health services, food, housing, employment and the fair distribution of income. Australia's Human Rights & Equal Opportunity Commission should devise programs to achieve economic, social and cultural rights, and not treat them simplistically as libertarian claims.

The UN *Declaration on Justice for Victims of Crime & Abuse of Power 1985* article 21 provides:

States should periodically review existing legislation and practices to ensure their responsiveness to changing circumstances, should enact and enforce, if necessary, legislation proscribing acts that constitute serious abuses of political or economic power, as well as promoting policies and mechanisms for the prevention of such acts, and should develop and make readily available appropriate rights and remedies for victims of such acts.

4 Four UN weaknesses

However, AusAID should seek tighter development processes. The UN is not perfect. First, the UN exaggerates the problem. It says that 1.3 billion people in abject poverty live on \$1 a day. That statement is silly and mischievous: it implies that people try to do what in our terms is impossible. The comparison discounts the substantial barter and other non-money aspects of some economies, and ignores the fact that a dollar buys more in some places than in others. It is like saying that because the French say *amour*, they know nothing of love.

Secondly, who is to fund Net aid? The UN General Assembly asks industrial countries to give 0.7% of their GNP in development aid. However, the *Declaration on the Right to Development* accepts that all peoples are developing. That dichotomy of developed and developing countries is simplistic, unjust and divisive. It sets an unacceptably crude rate of taxation: the dichotomy of rich and poor is no basis for fair redistribution. And it demands no input from donees. Systematic development aid will be regularised through UN taxes and program auditing. We should give aid on conditions of collaborative, accountable projects. Recipient states should ratify the human rights and ILO instruments which give authority to their claims for economic fairness. Emergency aid is *ad hoc*; but development aid is routine administrative planning, to be audited like the accounts of any public company or utility. We are all shareholders in development aid. In every regular annual session the UNGA adopts separate aid Resolutions for each country, as if aid is a matter of horse-trading rather than of principle. The right to development is a matter of justice, not charity: aid criteria must apply uniformly.

Thirdly, the UN sets fatuous, populist aims. Its *Decade for the Eradication of Poverty 1997-2006* raises false hopes. As Jesus the economist said, relativity of purchasing power is inevitable: You have the poor with you always (Mark 14:7). Likewise the UN aims of health and literacy for all by the year 2000 guaranteed failure. We need realistic program targets.

Fourthly, UN offices in Bangkok, Manila and Tokyo neglect the South Pacific; and the tiny UN offices in rented rooms in the PIF are feeble. Burying maritime Oceania in the vast Asia-Pacific Region is an insult and injury to the Pacific: even with the Net, it precludes any sense of regional community. Asia holds over half the world's people, and includes several regions: China and India are regions in themselves. We should carve out a region including all Pacific islands from Japan, Philippines, Indonesia, Brunei, Antarctica, and the Pacific Islands Forum. We need a large UN regional office in Australia. The UN has just concluded its *Second Industrial Development Decade for Africa 1991-2000*. That bias, too, is unjust: Oceanians have the same human needs and rights, and need equal programs.

The Net is central to setting and attaining development goals. Enhancing access globally can be tackled in a three-pronged fashion: from the angle of the poor countries, through bilateral and regional arrangements between nations, and UN agencies: —

5 Three stakeholders

5.1 Poor countries

Poor countries can lay foundations for the Net culture to take seed. They should allocate resources to telecommunications, promote Net use, provide incentives for Internet training, and give market incentives and tax credits to increase computer ownership. Singapore and India plan to make all people computer-literate. Governments should attract foreign investment with incentives like tax concessions and reliable electricity. They should practice

strict accountability and transparency under officials of integrity, committed to public service. Local business can help build infrastructure. Poor universities can bond with richer universities to tap their online tuition and libraries. Computer science students can develop software for local needs. Where there are few computers with Internet facility, local communities and government can set up Internet Cafés, and broadcast findings on radio. When TV was introduced in Ghana in the early 1960s, TV monitors were provided in community centres. The communities can sponsor the IT training of a few who will then help others access the Net (Anani 2000).

5.2 Advanced countries

Technically advanced countries can address their own social and economic imbalances. If you are poor or lack good education, it is not going to make much difference how many satellites we put in the sky and how many cables run past your house (Given 2000). Governments can improve their telecommunication infrastructure. Internet and phone companies should subsidise their remote regions: sustainable profits depend on attracting new users.

Governments can help poor countries set up IT. IT hardware and software quickly become outmoded. Wealthy, ethical universities (Harkness 1999) and businesses periodically replace hundreds of computers with new models; they could give the superseded models to poor neighbours to educate them and whet their appetites: www.pcrecyclers.net. Rotary has given computers to South Pacific islands, and the Geelong recycling charity PCs for Kids gives discarded computers to families on social security: pcsforkids@yahoo.com. Microsoft, IBM and Apple could donate computers as a public relations and seeding gesture to boost their markets. Sharing IT to let poor peoples catch up is both ethical and smart: it will make them better trading partners attuned to global commerce and the world community.

5.3 Multilateral agencies

French president Jacques Chirac (UNDP 2000) says, 'The UN is one of the most beautiful creations of the 20th Century... Development depends on respect for law, the quality of justice and the stability and effectiveness of the legal framework for investment.' The rule of law is easily the best contribution we can make to peace and prosperity; and the Net can disseminate law. The Net extends participation in decision-making. Marc Strassman (2000) recommends direct electronic democracy where millions of e-mail votes determine the direction of the state; as the Net becomes powerful, ubiquitous and easy to use, we can govern ourselves: www.digitaldemocracy.org. French MP Andr Santini says we may shift from an occasional democracy to a continuous one, reviving the agora of ancient Athens (Lefort 2000).

UNESCO's controversial *New World Information & Communications Order 1983* coincided with the US-UK withdrawal from UNESCO; but the NWICO ethic needs updating, not rejection. The UN General Assembly adopts Resolutions on information every year. For 1998 and 1999 see Resolutions 53/59 (information in the service of humanity); 54/198 article 26 (electronic commerce), 54/205 and 54/128 (against corruption), 54/211 article 9 (improving IT), and 54/175 articles 10 and 12(d) (right to development). The Assembly calls on the world community to address the deepening technological, financial and productive gaps mentioned here.

UNTeS is a UN IT Service coalition of high-tech volunteer corps, including Net Corps Canada and Net Corps America, for IT training in health, education, environment and business enterprise. It works with governments, NGOs, the UNDP and the World Bank, and has programs in Africa, Asia and South America: www.unites.org, www.un.org, www.undp.org/dpa, www.cisco.com/netaid; klas.bergman@unv.org and nanette.braun@unv.org. Oceania needs such a program. UN Volunteers could staff TACCs — Technology Access Community Centres housing phone, fax, computers, printers and Net service — and see the world at the same time. See further:

www.netaid.org — UNDP's 133 country offices.

www.sdn.undp.org: UNDP's sustainable development programs.

www.ldcs.org: trade aid to least developed countries.

www.jurisint.org: transnational legal agreements, dispute resolution centres, business lawyers.

www.intracen.org: International Trade Centre.

www.marketag.com/userpages/default.stm: agribusiness companies in developing countries can add home pages free of charge.

www.peoplink.org: non-profit portal for crafts and art from developing countries.

Education is a global industry for the rich. But the World Bank's African Virtual University broadcasts over 2,000 hours of instruction from leading scholars to over 9,000 students in Sub-Saharan Africa. UNCTAD, UNDP, UNESCO, the UN Environment Program, and the UN Information Department have programs to expand Net access globally. The WTO, WIPO, IMF and Asian Development Bank can similarly promote the Net. UN and national aid agencies could co-operate to compile relevant publications in digital form for poor countries.

Michael Loots (2000) has a plan. Development agencies can identify hundreds of publications to distribute digitally to poor states; agencies and authors can digitise this material in standard formats, and clear copyrights; then UN agencies can make collections, obtain peer review, and saturate their user base. First, create a first CD-Rom with about 200 publications, and distribute this to 10,000-20,000 recipients and multipliers; when the different collections are built and validated, combine them into one big CD-Rom library.

Then we can give every PC in Oceania a library of 2,000 vital publications.

6 Local applications

6.1 Prisoners

Corrections offers fertile soil for planting computer literacy: the need is great, and the rewards match it. Prisoners and probationers have poor job records, and prisoners have time on their hands. Training will lift their self-esteem and job prospects. The 650-man Fulham Prison in Gippsland provides basic IT courses taught by TAFE. The TAFE certificates do not show that they were won in prison. Inmates can do individual modules or full courses. A spacious computer room has multimedia computers for interactive learning. Trainees use the facilities for 8 hours a day 5 days a week. Prisoners are entitled to 4 hours minimum of education in the prison. Mental incapacity or short sentence stops some taking it up. The average stay is 60 days, but some serve 5-10 years. Some are paid wages for doing TAFE or university courses. The computer training is integrated with courses in hospitality, small business, resume writing, and horticulture.

For security, inmates are denied Net access. Perhaps online access to certain sites and data could be given to well-behaved prisoners. The chance to access their interests online might both improve behaviour and motivate IT learning. Filters could block out child pornography and bomb recipes. Supervised email with family would be rehabilitative, and is virtually a right under CCPR articles 10 and 23. Net access would make the training more rounded and beneficial. Those wanting the Net to seek employment or market their business could do so immediately on release. Job placement agencies can target recently released prisoners and help them find IT work. We should track ex-prisoners to see how they go.

The *Standard Minimum Rules for the Treatment of Prisoners 1955* provides for the compulsory education of illiterate prisoners. Today that education includes Net skills. Corrections should publicise their computer training, the responses they get, and this road out of welfare dependency. Their effectiveness depends largely on trainees' motivation. Many prisoners lack numeracy and literacy, and are nervous. Community Aid Abroad says, 'You can reap the benefits of the Internet if you're illiterate.' Computer literacy is now as basic as a driving licence.

6.2 Aborigines

Special effort should be made to attract Aboriginal inmates. Net literacy will speed their vocational and cultural goals. On 6 October 2000, out of 27 Aboriginal inmates in Fulham, only one was studying IT: they seek practical automotive training and driver education, and find IT too theoretical. But IT courses have helped some to write stories about their culture;

and one established a website to market his paintings later. The Aboriginal & Torres Strait Islander Commission could promote Internet skills and availability, and write websites for indigenous cultures (Turks & Trees 1999). Cultural diversity is as vital as biodiversity, but that does not mean preserving fossil cultures. As indigenes come to share in and with the world culture, and devise software to meet their needs, this will both change and harmonise all cultures. See:

www.aboriginalaustralia.com

www.arts.monash.edu.au/mosa/kulin/abt

Bob Collins MP said, 'Indigenous Territorians own half of the land in the NT, and 80% of its coastline and adjoining islands, and are party to an increasing number of multi-million dollar investment decisions in respect of economic development associated with the land. They need computer skills to manage and account for that wealth. ATSIPTAC, the Aboriginal & Torres Strait Islands Peoples Training Advisory Council, has two programs — *Learning IT Together* and *Making IT Our Own*. The Centre for Appropriate Technology (CAT) and the Institute for Aboriginal Development (IAD) in Alice Springs identify needs, assess students, plan delivery and assess job openings. Vocational training is a tool for development and cultural affirmation. ANTA, DETYA and Curriculum Corporation provide school materials for twelve industry areas: www.curriculum.edu.au/vetis.

Australian Education Minister David Kemp wants indigenes leaving school to be numerate and able to read, write and spell: www.austcolled.com.au. But that is not enough: again, literacy now includes computer literacy. Caring parents demand education for their kids. But some indigenous parents and leaders teach their children xenophobia. As president of Newlands College Council, Gary Foley said that the normal curriculum would crush Aboriginal culture. Curriculum must be hospitable and relevant; but Net work will teach Aborigines the world culture without its overwhelming them in *viva voce* contact.

6.3 Oceania

The Pacific Islands Forum [PIF] contains six of the world's least developed countries (Solomon Islands, West Samoa, Vanuatu, Kiribati, Tuvalu and East Timor). With the UNDP, ITU and UNESCO, it could start a project to extend Net access and reciprocal development plans in the region. The Net will disseminate UN policy and documents across this arc of instability, including information on self-determination of peoples and decolonisation. The PIF could help East Timor and West Papua to orderly development. Net links across the region will generate stabilising democratic debate and slow the flow of refugees.

The World Bank is shifting from infrastructure development to human resource development, focusing on education and health; its president James Wolfensohn urges Australia to offer low-cost, online, global education for developing countries. Our first call is to the PIF. The South Pacific is isolated from the mainstream, acting still like colonies rather than an autonomous region. The UNDP operates a Small Islands Developing States Network. Its Asia-Pacific

Development Information Program, based in Kuala Lumpur, has citizen information service centres which let people in remote areas link up with government, receive news and obtain computer training. It recently connected Tuvalu and Bhutan to the Net: now farmers can use IT to find the latest prices for goods they sell and buy. At the UNESCO education conference in Bangkok in January 2000, education ministers and officials said, 'Scattered across millions of square kilometres of ocean, Pacific nations will have to use IT to take education to every household in the remote islands' (UNESCO 2000).

7 Conclusion

Pressure will grow for a common alphabet, and for clearer keyboard distinctions between letters and numerals. However, this paper describes the urgency of an ethical use of computers in Australia's region. The Pacific Islands Forum has primary responsibility for regional development. It needs to win observer status at the UN, expand PIF membership and roles, set up a regional human rights commission, and start a collaborative development program using the Net. The computer industry could extend a professional ethic of public service into the region, for economic justice and for peace. The Australian Institute of Computer Ethics could enlarge its brief and spread an ethic of IT aid to meet the unique needs of Austronesia — the thousands of scattered islands of Melanesia, Micronesia, Polynesia, Australasia and the Indonesian archipelago. AICE and ACS could liaise with PIF, UNDP, ECOSOC, ATSIC and AusAID to connect all these peoples to the Net, and to supply affordable PCs, and train all pupils in their use.

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