

## DIGITAL NATION

### Information and Communications Technology Policy

#### Our Vision

Labour would like to see New Zealand become a leader in the use of digital technology, to help transform New Zealand economically and socially.

A strong and vibrant information and communications technology (ICT) sector is a platform which will help improve New Zealand's economy and society. It is core infrastructure for New Zealand. Our ability to develop world class new technology and creative content capacities will be enhanced through a converged approach to both the ICT and broadcasting (content creating) industries.

The convergence of technology across the telecommunications, ICT and broadcasting sectors require a converged policy framework to deal with them effectively and efficiently.

This policy sets out Labour's approach to the ICT sector. It should be read in conjunction with Labour's Broadcasting policy.

#### 1. Convergence between broadcasting and telecommunications

Convergence means that content types that used to be available only on separate networks are seeping across into each other. Audio-visual material can be carried over the Internet as it can over broadcast TV; voice works over the copper phone network, over the Internet and over cellular mobile networks. This trend is accelerating, and isn't going to reverse.

That is why Labour wants to see a shared policy, regulatory and legislative framework for the broadcasting, telecommunications and Internet realms. Many other countries including the United Kingdom and Australia have already taken this approach. As the technologies converge a number of issues arise around the networks that will be needed to carry both content produced inside New Zealand and that which comes from outside the country.

Labour believes a single network regulator for Telecommunications and Broadcasting has merit.

**Labour will prepare a proposal for public consultation within six months of taking office setting out the path towards a single powerful regulator for telecommunications and broadcasting.**

It is our expectation that the converged regulator will be located within the Commerce Commission and would obtain any additional resources required by means of an industry levy system. The legislation would be modelled on the way the Telecommunications Act currently works. Labour would have particular regard to addressing the impact of monopolies in both the telecommunications and broadcasting marketplaces.

The consultation will also consider the regulatory mechanisms for content that is carried on broadcasting and telecommunications networks. It may be that the functions of the Broadcasting Standards Authority, the Press Council and the Advertising Standards Authority could be brought together.

Labour will take note of the outcomes of the Commerce Commission study into demand-side barriers to uptake of Ultra-Fast Broadband including content, which may have implications for regulatory change.

In parallel with these regulatory changes, the policy arm of government dealing with these issues may be able to be done more efficiently if brought together. Current policy is spread across a range of agencies including Ministry of Economic Development, Department of Internal Affairs, Ministry of Culture and Heritage, State Services Commission and others.

**Labour will investigate creating a Ministry of Communications and IT, based in the Ministry of Economic Development, to bring together all policy involving broadcasting, communications and information technology issues.**

Among the tasks for the new Ministry would be to create and oversee a digital strategy for New Zealand (with specific focus on improving the government's use of ICT), to fund research, to ensure that regulatory frameworks were consistent, to focus on open access, open interconnection and network efficiencies, to support innovation and to consider expanding the Nga Pu Waea model for more user governance.

Information technology issues often get left to ICT departments, which means that the transformations that ICT can allow for public and private sector growth happen slowly or not at all. Increasing the visibility of ICT issues across the government is an important step that can help drive change faster.

**Labour would appoint a Chief Technical Advisor, who would have responsibility for producing technology roadmaps for New Zealand, for overseeing NZ's national digital architecture driving the uptake of ICT across society.**

This would be a strategic, not operational position, much like the Chief Science Advisor, but would provide strategic and operational advice on technology policy issues. The position would sit within the new Ministry, but would report directly to the Prime Minister. Labour would consider modelling the position along the lines of The Chief Technology Officer of the United States (CTO).

One final concern is that, compared with other countries, the consumer voice is largely missing in both the telecommunications and broadcasting markets. The Australian Consumer Communications Action Network provides a model.

**Labour will investigate ways to ensure there is a strong mechanism for New Zealanders to voice their issues, concerns and vision with regards to telecommunications, broadcasting content and the digital environment.**

## 2. Faster broadband everywhere: networks and infrastructure

New Zealand needs high speed broadband across urban and rural areas. Our future networks will rely on fibre, either straight to the home or by using wireless backhaul where the normal route is unavailable, but we also need to ensure that the whole population has access to high speed Internet access through wireless or satellite, where fibre is not able to be laid.

### a) Broadband: sorting out the mess

Labour is committed to an ultrafast broadband scheme across New Zealand and to closing the digital divide. Labour's broadband plan is technology neutral (i.e. the provision of Internet without government oversight of its use or content), with fibre access the priority in urban areas. In all networks, open access and fair regulation will support a pro-competitive environment that brings significant benefits to users.

Plans are already under way to invest in new infrastructure in urban and rural areas. Labour would have approached the fibre rollout in urban areas differently. We would have had a concern with closing the digital divide as a key component in developing both rural and urban broadband rollout plans. We would have run a transparent process that honestly accounted for the true costs of the plans.

The consequence of the Government's failures in this area is that Labour will require significant changes to be made.

Competition between the new fibre network and the old copper network has been limited through relaxing the regulations around Telecom, and allowing the new Chorus infrastructure company to do deals with other Local Fibre Companies (LFCs) that will not be good for competition.

**Labour will conduct an independent review of the rollout by an international expert, including a full assessment of the true costs of the choices that have been made. The review will be completed by 30 June 2012, and will be published to allow for full and transparent scrutiny.**

Labour anticipates that this review will lead to significant changes for Ultra-Fast Broadband partners and for Chorus in tackling the digital divide concerns set out elsewhere in this policy. We recognise that the Ultra-Fast Broadband partners have invested in good faith. The same principle will apply to any changes to the roll-out. We do however remain committed to delivering on the vision of fibre to the home for most Kiwis:

**Labour will complete the fibre rollout in urban areas within the limit of the \$1.35bn of funds available for investment by Crown Fibre Holdings.**

Labour has concerns with the broader policy framework that applies to urban and rural broadband, and with the amendments to the Telecommunications Act passed in 2011. It is good for the industry that the idea of giving a regulatory holiday to fibre investors was dropped, however other problems remain.

Labour will conduct a quick review of the policy framework, and expects to propose changes to tackle at least the following matters:

- restore to the Commerce Commission the ability to set prices for the copper local loop, instead of dictating a single New Zealand-wide price (i.e. end forced national averaging);
- establish whether mass market urban fibre can be unbundled as it is rolled out, and whether the fibre network can operate on the principle of the “equivalence of inputs” (EOI) standard from build, rather than from 2020. This would mean Telecom and the other service providers have to provide access to the network on the same terms to all retailers, preventing Telecom Retail from gaining an advantage.
- ensure that the Commerce Commission has full power to examine the contractual arrangements between the Crown and private investors.
- review the role of Crown Fibre Holdings in the urban rollout and MED in the rural rollout – it may be possible to run both programmes in one agency.
- consider the role of state owned enterprise Kordia in broadband.
- assess the implications for the Kiwishare Obligations<sup>1</sup> in the legislation and contractual arrangements. Labour will make sure that the recent changes do not impede New Zealanders’ ability to access the telecommunications services they need to participate fully in the information society.

## **b) Broadband: next steps**

The changes set out above will give the industry and consumers confidence that a level playing field is in place for the future. It is a priority for Labour to make sure that broadband is available to all Kiwis; this hasn’t been a feature of the rollout so far. That will change.

**Labour will as an underlying principle do as much as it can, within the limit of the \$1.35bn of funds available for investment by Crown Fibre Holdings, to bring forward the time at which consumers, schools and businesses can experience unconstrained Ultra-Fast Broadband, in order to get the economic benefits of the fibre we have helped pay for.**

There is no reason in principle that rollout of fibre to urban areas should be limited to 75% of New Zealanders. Any extension to the Ultra-Fast Broadband programme to broaden fibre access will be paid for by extending the timeline for return of the money to Crown Fibre Holdings by the Local Fibre Companies (LFCs), or extending the repayment of funds loaned to or invested in Chorus.

**Labour will, within the limit of the \$1.35bn of funds available for investment by Crown Fibre Holdings, extend the Ultra-Fast Broadband to other areas of New Zealand where it can be deployed at similar costs to the existing planned rollout, and remove any legislative impediments to doing so.**

We accept there are parts of New Zealand that will struggle to get access to fibre in the near future because of geographical isolation.

**Labour will ensure such remote areas are given priority under the Rural Broadband Initiative for access via satellite, wireless or other means.**

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<sup>1</sup> The National Government’s Telecommunications Amendment Act 2011 amended the Kiwi Share Obligations (KSOs). The KSOs form part of Telecom’s constitution and require them to act in a socially responsible manner. The obligations include, among other matters, duties regarding the supply of the local residential telephone service.

Labour remains concerned that the Ultra Fast Broadband and Rural Broadband initiatives will not result in government-funded fibre roll out competing with existing fibre provision, particularly in built up urban centres.

Labour is concerned with ensuring that fibre is laid as a priority to the parts of New Zealand where the market is not drawn by demand. This includes Maraes, training institutions, hospitals and medical centres, as well as schools.

**Labour will closely monitor the roll-out of ultrafast broadband and the Rural Broadband Initiative, to ensure that the infrastructure being built with public funding is deployed promptly to parts of urban and rural New Zealand in a way that will significantly lessen the digital divide.**

**Labour will work with local authorities to identify and remove barriers to the fastest possible fibre roll-out and to support local digital strategies.**

Making the most of access to the global Internet requires better connectivity between New Zealand and the rest of the world. Several market initiatives are underway to build new undersea cables to Asia and the Americas. Labour wishes these initiatives every success, as they would increase the security and capacity of New Zealand's links to the world. Labour in Government would be supportive of these initiatives and would consider other options to deliver new cables if required.

Finally, more can be done to improve school access to the new infrastructure being rolled out in urban areas. Giving schools unconstrained broadband opens up huge opportunities for them to collaborate, and to giving students access to specialist teaching and expertise from anywhere they choose to get it. While the government is currently providing assistance to physically connect schools to ultrafast broadband, schools are expected to absorb most of the costs of upgrading internal infrastructure from their existing operations budgets. There is no assistance provided for increased usage costs within schools which will grow significantly with increased data consumption.

Labour believes that in order for schools to benefit from ultrafast broadband these issues need closer scrutiny and that wherever possible bulk rates for schools should be made available structured in a way that schools do not lose their choice of supplier.

**Labour will combine the government's spending on broadband for schools under the Ultra Fast Broadband initiative to provide unconstrained access for schools at affordable rates.**

## **c) Radio Spectrum**

Prime radio spectrum rights are expected to be auctioned in 2012 to support fourth-generation (4G) super-fast mobile networks freed up by the closure of analogue television in 2013. This spectrum is best used for the provision of new mobile communications and broadband technologies, and can be used to reduce the digital divide between rural and urban New Zealanders. Labour is concerned with reducing this divide and so would aim to see the spectrum used to close it.

**Labour will conduct a public discussion about the objectives and the process for the spectrum auction, and how the proceeds from the auction should be spent in New Zealand, before the auction occurs.**

Attention will particularly be paid to Maori involvement in information and communications technology. Labour will also conduct a review of interests who currently own spectrum rights but do not use them with a view to setting a deadline for a "use it or lose it" approach.

## 3. Closing the digital divide

### a) Understanding the digital divide

New Zealand's economic future lies in weightless exports. The future of the nation relies on Kiwi children becoming digital Kiwis.

The country must not have a digital divide. Labour believes some of our greatest innovation can come out of our most deprived areas. The new broadband network must not be a tool to entrench the divide between the haves and the have nots.

Around 20% of New Zealand households currently do not have a computer. These unconnected homes are predominantly in lower socio-economic areas and are often home to Pasifika and Māori families. While programs such as Computers in Homes, Computer Clubhouse and Aotearoa People's Network do great work in increasing digital literacy, their success is sporadic because of limited funding.

A key way to increase the connectedness and literacy for many New Zealand households is to leverage the education system by ensuring every child has access to a device.

Computers in Homes (2020 Communications Trust) has estimated that there are 100,000 families with dependent children who do not have access to a computer at home. They are more likely to be one-parent households and from Maori and Pasifika backgrounds where children are unable to participate equitably in digital learning and using technology.

The effects of this absence, given the growing importance of Internet access, needs to be understood. Clear evidence of harm could justify further interventions to ensure all families have a path towards access that is fair.

**Labour will fund systematic research, monitoring and public reporting into impacts of the digital age on New Zealanders and how investment can make a difference socially and economically.**

### b) Digital Kiwis: Improving access to technology

Labour is committed to ensuring that all New Zealanders, regardless of income and background are able to access, afford and get the best use from technology. Labour will continue to fund and prioritise free or low-cost Internet access through programmes such as Aotearoa People's Network, School-based ICT, Network of Aotearoa Clubhouses (NOAC), Computers in Homes, and the Kiwi Advanced Research and Education Network (KAREN).

Computer Clubhouses provide a free, out-of-school learning programme for young people aged 10-18 years of age. Members have access to high-end technology and industry-standard software, allowing them to develop advanced information and technology skills. The Clubhouse is proactively creating a socially and digitally connected community of learners of over 40,000 young people and their families who are digitally fluent and have advanced high tech skills to mobilise new ideas, actions, careers, entrepreneurial and higher learning opportunities. Research shows Clubhouse members remain engaged in school. Clubhouses are located in low socio-economic areas, meaning the young people from these areas might not otherwise have access to technology.

The 2020 Communications Trust connects families with school-aged children to the internet in their homes and provides parents with basic digital literacy skills. StatisticsNZ estimates there are 100,000 homes with school-aged children without access to the internet. Computers in Homes are currently funded to support 1,500 families each year.

Labour will increase funding to Computer Clubhouses for the most vulnerable communities in NZ. Labour will also increase funding to Computers in Homes in order to make more rapid progress in bridging the digital gap. (We have allocated up to \$2.7 million a year for the expansion of these two initiatives.)

Labour is committed to progressing and implementing proper achievement standards in ICT in schools and notes the progress that has been made subsequent to the recommendations made by the Digital Technology Experts Panel, which include a range of new achievement standards that are built on a new body of knowledge.

### **c) Digital Kiwis: Skills training for the digital economy**

Labour will support a range of actions designed to address the current skills shortage in the ICT sector and wider community by promoting digital careers, matching tertiary courses to industry needs and attracting more skilled ICT practitioners to New Zealand.

Internships are highly successful at driving R&D within primarily small, innovative tech companies which often can't afford to run those types of R&D projects otherwise, and they also provide excellent and much needed experience and engagement for participating students.

There are 200 places available for interns working on strictly R&D projects within companies at the undergraduate level per year across the country in all science, technology and engineering fields, plus postgraduate. This is not enough.

Labour will lift the number of interns to 1000 nationwide, which is the basis for a solid programme of innovative R&D across the country. This will be paid for by reallocating \$5.1 million from Technology Development Grants funding.

It is important to accelerate skills development in every sector, and ICT is central to a transition to a highly-skilled country.

Labour will encourage the broad based coverage of the ICT industry by an ITO, and include ICT training in the Modern Apprenticeships Scheme.

## 4. Digital copyright for the 21<sup>st</sup> century

Digital technology offers many new opportunities. The creators of content should be compensated for their work and consumers should have freedom for personal use of digital content they rightfully possess. A vibrant, creative market for digital productions where consumers can easily find and buy the material they want is something Labour wants to see develop in New Zealand.

In the past it was not easy to copy and share video cassettes, but the Internet has made copying cheap and easy. In this new world, people still want and are willing to pay for creative content. They simply want to be able to get what they want, when they want it, and easily.

Labour does not stand for the protection of industrial or business models whose time has passed, and it welcomes the radical innovation the Internet has given rise to. Labour does support a vibrant New Zealand content industry, and the role of intellectual property law in helping to achieve that.

Internet access is not just a utility or essential service. It enables the provision of social and family connections across distances and time zones, education and work opportunities. Therefore all New Zealanders should have the ability to access the Internet and Labour will work to ensure they do. People rightfully expect that such access won't be removed in arbitrary ways or for no reason.

**Labour affirms that the fundamental human right to impart and receive information and opinion necessarily includes the ability to access the Internet in order to give practical effect to the right in today's world.**

Labour does not believe today's Copyright Act provides the right framework to see New Zealand's information economy thrive. It does not handle convergence well. Its adaptations to the Internet are half-hearted. The Act needs to be fundamentally reviewed and made fit for the Internet era.

As is recently referred to in a UK independent report *Digital Opportunities*, the businesses that create content for the public need to change, in the form of more open, contestable and effective global markets in digital content and a setting in which enforcement of copyright becomes effective once more.

**Labour will undertake a full review of the Copyright Act, with the aim of introducing a new Copyright Bill within 18 months that updates and extends the framework for digital copyright in New Zealand.**

The first phase of the review will be to commission an independent analysis of the problems with the status quo from an eminent expert, such as the review Professor Hargreaves has recently conducted for the UK Prime Minister, and then further consult on a draft Bill before it is introduced.

Labour has carefully paid attention to the community's concerns with the recent amendments to the Act, as well as the earlier debate in 2009 which led to the most recent set of changes. We have heard the community's concerns.

**Labour will introduce a bill within 90 days of taking office to remove from the Copyright Act the ability to introduce account suspension for infringing file sharing as a remedy the District Court can impose.**

Labour will consider expanding the role of NZ Onscreen as a broader online content storage facility and will actively encourage new business models where NZ creative content can be distributed online in an affordable and accessible way.

To be able to do these things requires protecting the ability of the New Zealand parliament to make copyright law. Retaining sovereignty over our intellectual property is critical to the development of our creative industries, as well as the protection of the public good in some instances.

**Labour will not compromise our ability to trade on our intellectual property, recognising our international obligations under the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement. It is imperative that we find new ways of negotiating trade agreements which recognise new industries and opportunities arising from new technologies.**

Labour will also investigate the viability of a small copyright levy on Internet access, which would develop the digital platform for accessing Kiwi content mentioned above. Funds raised could go to content creators through an arms length collecting and distribution arrangement.

## 5. Excluding software from patent law

The Patents Bill proposes excluding computer software from being patentable, on the basis of it being, like books or movies or music, based on a concept and receiving protection under copyright. For software, copyright is the appropriate form of intellectual property protection.

At present software can be patented so long as it produces a "commercially useful effect". This means software developers don't need to show any inventive step in order to get a patent; they merely need to show they can make money off their software.

Parliament's Commerce select committee, which examined this issue, said that it accepted that software invariably built on existing software and that software patents were often granted for "trivial or existing techniques." Labour supports the select committee stance that using intellectual property in a fair and reasonable manner would promote innovation and build advanced industries.

**Labour will enact and implement the draft Patent Bill currently before Parliament that excludes computer software.**

Labour notes the select committee recommendation that the Intellectual Property Office develop guidelines for inventions that involve 'embedded software' - software that is built into a physical device. Labour believes the Patents Bill deals with this issue adequately, but will seek further advice on this as part of the review of digital copyright.

## 6. Open Software: revolutionising government software purchasing

### a) Open Software in government

There are many huge, costly IT projects inside government, and these often go badly and lead to vast sums of money going offshore. Departments are secretive about their technology projects, and don't share them, even with other departments.

Labour believes that smarter government means departments sharing their technology. This will save money inside government, and provide a competitive advantage for New Zealand businesses.

**Labour will issue a binding instruction to government agencies to implement a whole of government approach to open software.**

The instruction will be made under the Public Finance Act 1989, and will include the following components:

- **Prevent vendors double-dipping.** Require that when the government pays for software to be created, it will be owned by the government, and will be shared within government and with the public using an open source license.
- **Stop the secrecy.** Investigate obliging agencies to disclose on their websites the cost and usage of each software product used (where doing so does not increase costs).
- **Stop silo thinking.** Require that agencies evaluate the costs at a whole-of-government level when deciding whether to develop and freely share software or instead to license it.
- **Free the code.** Require all software developed under Crown Copyright to be made available to the public on an open source license.
- **Allow systems to join up.** Require that new agencies only purchase new computer applications that inter-operate using published, open standards.
- **Encourage smarter decisions.** Require agencies considering new technology purchases over \$2 million to first evaluate whether existing publicly available technology substantially meets their business requirements, and the cost of changing their processes to adapt to the existing technology.

### b) Other Open software initiatives

#### **Labour will create a government 'App store'**

A government-run 'app store' could provide a short circuit for fledgling NZ software developers to get to market. The 'app store' would be open for any local developers to submit their software where it could be purchased and used by government agencies.

#### **Labour will ensure "Informed Neutrality" in software purchasing**

Purchasers in government agencies and their suppliers must consider all types of available software (open source, mixed and proprietary) during procurement procedures.

#### **Aspire to wide use of open source software**

Labour will set an aspirational target of 2/3 of government agencies using some form of open source software for a reasonable proportion of their software needs by 2015.

#### **Greater diversity in suppliers**

Labour will engage in active government engagement with the local open source community to devise ICT solutions rather than just talking to the large, dominant suppliers.

## **Open Source Software Centre of Excellence**

Labour will work with New Zealand tertiary education institutions to establish a 'Centre of Excellence' for open source software development. Based upon the 2006 initiative of the French Government, such a centre would be designed to help develop a strong export-creating software industry for New Zealand.

## **7. Cyber security: Protecting New Zealanders from attack**

Labour supports New Zealand's Cyber Security Strategy and would ensure it is implemented. We support the general thrust of the strategy but will ensure that it is strengthened.

The strategy focuses on:

- Increasing Awareness and Online Security – the Government is partnering with industry and non-government organisations to improve access to cyber security information, raise awareness and address other cyber security awareness issues.
- Protecting Government Systems and Information – the Government is establishing a National Cyber Security Centre and implementing steps to improve cyber security practices across government.
- Incident Response and Planning – the Government is reviewing how it responds to, and plans for, cyber incidents.

Labour will ensure there is real engagement with industry on cyber security.

Labour notes the strategy includes a commitment to work with industry to establish the need for a Computer Emergency Response Team (CERT). There has been a clear need articulated for a CERT for a long time.

**Labour will establish a Computer Emergency Response Team for New Zealand.**

Labour will ensure that cyber security expertise is developed within New Zealand education at the tertiary level and via the certification of professionals.