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Inhoud

Bijlage-extra 1 Leeftijdsdiscriminatie

Stereotiepe beeldvorming over leeftijd is wijdverbreid in onze maatschappij en diep verankerd in ons denken. Door de stelligheid waarmee stereotypen doorgaans worden neergezet, lijkt het daarbij om op feiten gebaseerde kennis te gaan. Iets wat lang niet altijd het geval is, zoals blijkt uit diverse onderzoeken. Ongefundeerde negatieve beeldvorming kan tot onrechtvaardige behandeling op grond van leeftijd leiden. Het gebruik van leeftijdsgrenzen is sinds enkele jaren onderwerp van maatschappelijke en politieke discussie, maar bevindt zich nog grotendeels in een fase van bewustwording en meningsvorming. Het LBL ziet het als een van haar taken om deze discussie en meningsvorming te stimuleren. Vandaar dat besloten is om een publicatie aan deze materie te wijden.

Ouder worden: een kwestie van leeftijd?
De publicatie bevat bijdragen vanuit de biologie, psychologie, rechtswetenschap, filosofie, geschiedenis, sociologie, pedagogie, economie en sociale gerontologie. Aan de orde komen onderwerpen als de relatie tussen leeftijd en productiviteit, wijsheid en cognitieve achteruitgang. Ook aande de samenhang die er bestaat tussen jeugd, volwassenheid en ouderdom wordt aandacht besteed. Opvallend vaak blijkt dat leeftijd geen directe rol speelt bij het denken over deze categorieën.

Waarom deze publicatie
In de discussie over het gebruik van leeftijdsgrenzen op o.a. het gebied van de. arbeid, de gezondheidszorg en het wonen worden uiteenlopende argumenten gebruikt, zoals schaarsteverdeling, bescherming en rendement. De samenhang tussen deze argumenten ontbreekt echter vaak nagenoeg en de theorievorming over leeftijd en maatschappij is momenteel verdeeld over verschillende wetenschappelijke disciplines.

Om meer inhoud aan de discussie over de rechtvaardiging van leeftijdsgrenzen te geven zullen de argumenten geobjectiveerd moeten worden. Nieuwe wetenschappelijke inzichten kunnen daarbij behulpzaam zijn.

Het LBL wil met deze bundel het debat over de betekenis van leeftijd in relatie tot ouder worden, levensloop en levensfasen stimuleren. Zowel tussen de wetenschappers onderling als tussen wetenschappers en beleidsmakers. Het doel daarbij is dat het (onterecht) hanteren van leeftijdsgrenzen verdwijnt.

Manifest tegen leeftijdsdiscriminatie 2002

Het LBL heeft in een manifest tegen leeftijdsdiscriminatie beschreven wat er volgens het LBL, expertisecentrum leeftijd en maatschappij, de komende jaren moet veranderen om de discriminerende effecten van het onterecht hanteren van leeftijdsgrenzen te laten verdwijnen.

Op 11 april 2002 heeft het LBL in Den Haag het manifest tegen leeftijdsdiscriminatie aan de lijsttrekkers van de politieke partijen aangeboden. Zonder uitzondering stonden de politieke partijen achter de eis van het LBL om leeftijd als non-discriminatie grond op te nemen in de Algemene Wet Gelijke Behandeling (AWGB). Zij hebben toegezegd activiteiten in die richting te ondernemen en het LBL zal hen kritisch volgen of zij die belofte ook gestand doen.

Het LBL ontvouwt de toekomst

* Leeftijd zegt niets over de capaciteiten, wensen en behoeften van mensen.
* Leeftijdsgrenzen hebben uitsluiting tot gevolg en waar dat onterecht is moet dat door middel van wetgeving verboden worden. Het LBL is vóór een maatschappij die mensen in de gelegenheid stelt eigen keuzes te maken en zelf te laten bepalen hoe hun levensloop eruit ziet.

Wat wil het LBL

1. Leeftijd moet als non-discriminatiegrond wordt opgenomen in de Algemene Wet Gelijke Behandeling (AWGB).

2. Het LBL wil een Europese richtlijn die garandeert dat leeftijd geen belemmering is bij de toegang tot goederen en diensten.

3. De overheid dient er door middel van wet- en regelgeving, gerichte voorlichting en het geven van het goede voorbeeld zorg voor te dragen dat binnen arbeidssituaties discriminatie op grond van leeftijd verdwijnt.

4. Het LBL is voor een collectieve regeling die het mogelijk maakt om op basis van individuele afspraken door te werken na het bereiken van de pensioengerechtigde leeftijd.

5. Kinderen en ouderen moeten in voldoende mate worden betrokken bij het onderzoek naar de werkzaamheid van geneesmiddelen.

6. Het stelsel van zorgverzekeringen dient zo te zijn ingericht dat de toegang tot de zorg voor iedereen gewaarborgd is, ongeacht zijn of haar leeftijd.

7. Leeftijdsgrenzen in polis- en kredietvoorwaarden op grond waarvan mensen onterecht worden uitgesloten dienen wettelijk te worden aangepakt.

8. Bij het toewijzen van sociale huurwoningen mag leeftijd geen criterium van doorslaggevende aard zijn.

9. De overheid moet er door middel van beschermende maatregelen en gerichte

voorlichting voor zorgen dat kwetsbare leeftijdsgroepen veilig aan het verkeer kunnen deelnemen.

10. Iedereen moet ongeacht zijn of haar leeftijd de keuze kunnen maken waar, hoe, wat en waarom er geleerd wordt. In de regelgeving met betrekking tot het faciliteren van leermogelijkheden mag leeftijd geen rol spelen.

Iedereen moet, ongeacht leeftijd, deel kunnen nemen aan de maatschappelijke activiteiten van zijn of haar keuze
en dat is voor veel mensen niet mogelijk.

Het LBL, expertisecentrum leeftijd en maatschappij is van mening dat leeftijdsgrenzen steeds kritisch benaderd moeten worden en zo mogelijk moeten worden afgeschaft.   In Nederland is er geen specifieke wet die leeftijdsdiscriminatie verbiedt. Het verbod om op grond van leeftijd te discrimineren valt wel onder het algemene discriminatieverbod van artikel 1 van de Grondwet. Het LBL is van mening dat er specifieke wetgeving moet komen en stimuleert dat leeftijd als non-discriminatiegrond wordt opgenomen in de Algemene Wet Gelijke Behandeling (AWGB).

Veel maatregelen die gebaseerd zijn op leeftijd zijn discriminerend. Wie vindt dat vooral jongeren enthousiast en flexibel zijn overvraagt jongeren en sluit ouderen uit bij het vinden van werk. Een leeftijdsgrens bij het toewijzen van een woning zorgt ervoor dat het voor bepaalde woningzoekenden onmogelijk is om in aanmerking te komen voor de huisvesting van hun keuze. Een leeftijdsgrens in een ziektekostenpolis of bij kredietvoorwaarden laat mensen in de kou staan en onthoudt hen mogelijkheden die anderen wel hebben.

In alle levensfasen moeten mensen zich veilig en onafhankelijk kunnen bewegen in hun leef- werk- en woonomgeving. In het verkeer bijvoorbeeld zijn kinderen en ouderen extra kwetsbaar. Kinderen zijn kleiner en hebben minder fysieke kracht dan volwassenen. Ze zijn minder goed in het inschatten van gevaarlijke situaties. Gebouwen zijn niet altijd goed toegankelijk en ook bij het openbaar vervoer kan nog veel verbeterd worden. Door middel van doeltreffende regelgeving en goede voorlichting kan de overheid ervoor zorgen dat er meer rekening gehouden wordt met kwetsbare leeftijdsgroepen.

Als het gaat om beleid waarbij leeftijd direct of indirect een rol speelt volgt het LBL de overheid kritisch bij het nemen van beslissingen en bij het uitvoeren van de plannen.Beeldvorming en mythevorming zijn er de oorzaak van dat we ons gedrag, onze mening en onze oordeelsvorming afstemmen op wat we zien, op wat we verwachten te zien of op wat we willen zien. Dat structureert ons denken en stuurt ons handelen.

Vaak lijken leeftijdsgrenzen willekeurig gekozen en vooral politiek, maatschappelijk of economisch geïnspireerd.

Een voorbeeld daarvan is een leeftijdsgrens bij het samenstellen van onderzoeksgroepen bij geneesmiddelenonderzoek. Kinderen en ouderen worden regelmatig uitgesloten van onderzoek naar de werkzaamheid van geneesmiddelen die wel aan ze worden voorgeschreven. Het gevolg is dat er te weinig bekend is over onder andere de bijwerkingen van geneesmiddelen bij kinderen en ouderen.

Het LBL, expertisecentrum leeftijd en maatschappij zet zich in om:
- kennis te vergaren en te beheren met betrekking tot alles wat met leeftijd en leeftijdsgrenzen te maken heeft,

- maatschappelijke vraagstukken te verkennen met betrekking tot (onterechte) leeftijdsgrenzen,
- oplossingen te ontwikkelen die het voor mensen mogelijk maakt om, ongeacht zijn of haar leeftijd, deel te nemen aan het maatschappelijk verkeer,
- in Europees verband netwerkvorming en samenwerking te bevorderen.

Er is in de afgelopen jaren veel bereikt, maar nog lang niet voldoende. Voor scheidsrechters in de Nederlandse competitie geldt geen maximum leeftijd meer van 46 jaar en de topcompetitie van de Koninklijke Nederlandse Wielren Unie voor aspirant-professionals staat nu ook open voor renners van 27 jaar en ouder. Maar ondanks het feit dat veel mensen het niet vanzelfsprekend meer vinden dat je bij het verlengen van je rijbewijs medisch alleen gekeurd moet worden vanaf je 70ste , is die verplichting er wel. Mensen vinden het onrechtvaardig dat een bank aan iemand van 65 jaar en ouder veel minder geld wil lenen dan daarvoor, maar banken hanteren die regel wél.
Toch raken steeds meer beleidsmakers bij overheden en in het bedrijfsleven ervan overtuigd dat leeftijdsgrenzen niet zomaar kunnen.
Het LBL werkt samen met gelijkgezinde partners, zowel nationaal als internationaal. Die samenwerking zal, gebaseerd op respect en met begrip voor ieders eigenheid, worden geïntensiveerd en verbreed.

Het LBL heeft er in de afgelopen jaren structureel en met veel inzet toe bijgedragen dat een omslag in het denken en handelen over leeftijdsgrenzen op de politieke en maatschappelijke agenda is gezet.

Leeftijd en wonen
Leeftijd mag geen criterium zijn om voorrang te krijgen

Leeftijd is een veel gebruikt criterium in woonruimteverdeelsystemen. Bij het verdelen van sociale huurwoningen kan leeftijd als label op een huis geplakt worden. Zo kan er bijvoorbeeld bepaald worden dat een huis geschikt bevonden is voor een 18 tot 23-jarige. Een 26-jarige maakt dan geen kans op die woning. Ook kan leeftijd gebruikt worden als criterium om de woningzoekenden in leeftijdscategorieën op te splitsen. Tenslotte kan met leeftijd een rangorde aangebracht worden om binnen de groep woningzoekenden de volgorde voor toewijzing te bepalen.

Bij woningtoewijzing via het veel gebruikte aanbodmodel wordt het woningaanbod in een zogenaamde woonkrant gepubliceerd.
De woningzoekende kan een bon uit deze krant invullen. Als die wordt opgestuurd naar een woningbouwcorporatie 'reageert' men op een woning. De woningzoekenden worden meestal verdeeld in een groep 'starters' en een groep 'doorstromers'. Een 'doorstromer' laat een zelfstandige, toewijsbare (lege) woonruimte achter.
Een 'starter' laat een onzelfstandige of geen toewijsbare woonruimte achter.

Bij 'doorstromers' wordt bij gelijke passendheid veelal de tijd dat men in het huidige huis woont (of: 'woonduur') als onderscheidend rangordecriterium gehanteerd en bij 'starters' de leeftijd. Dat houdt in dat in de groep 'starters' de oudste altijd de woning toegewezen krijgt en de jongste nooit aan de beurt komt.

Het LBL is van mening dat leeftijd als volgordecriterium niet acceptabel is. Dat geldt ook voor de toelating tot serviceflats of ouderenwoningen, waarbij geen onder- of bovengrens qua leeftijd gehanteerd zou moeten worden. Leeftijd zegt immers niets over de behoefte aan een (andere) woning en leeftijd is geen reden om iemand anders voor te laten gaan.

Ook andere manieren waarop leeftijd gebruikt wordt in woonruimteverdeelsystemen, zoals labeling en categorisering, moeten onder de loep genomen worden en waar nodig aangepast.

Leeftijd en werken
Kalenderleeftijd zegt niets over iemands geschiktheid om te werken.

Leeftijdsgrenzen komen voor op alle terreinen van de arbeid. Dat gaat van leeftijdsgrenzen in personeelsadvertenties tot teksten in CAO's die ontslag op 65-jarige leeftijd verplicht stellen. Ook op een indirecte manier worden mensen op grond van hun leeftijd uitgesloten: oudere sollicitanten die wel aan de gestelde functieeisen voldoen worden afgewezen omdat ze 'niet in het team passen'. Oudere werknemers nemen minder vaak deel aan scholing, er worden minder functioneringsgesprekken met hen gevoerd en soms worden ze 'aangemoedigd' om de VUT in te gaan. Steeds vaker verzetten mensen zich tegen leeftijdsgrenzen die geen recht doen aan hun individuele inzet, kennis en ervaring.

De Nederlandse overheid werkt, mede op grond van Europese richtlijnen, aan gelijke behandeling op de arbeidsmarkt op grond van leeftijd. Dit verbod op leeftijdsdiscriminatie moet mensen van alle leeftijden een stevige positie op de arbeidsmarkt garanderen. Ook bij krapte op de arbeidsmarkt staan ouderen nog steeds achteraan als er een vacature vervuld moet worden. Terwijl ze bij reorganisatieontslagen juist vooraan staan. Terwijl de overheid de positie van ouderen op de arbeidsmarkt wil verstevigen, vinden veel bedrijven dat ze te vergrijsd zijn en willen daarom het personeelsbestand verjongen.

Vergrijzing wordt geassocieerd met een hoger ziekteverzuim, een lagere productiviteit, een minder flexibele houding, het niet kunnen bijhouden van technologische ontwikkelingen en kennisachterstand. De vraag of deze negatieve stereotypen op bedrijfsniveau ook feitelijk kloppen wordt zelden of nooit gesteld en vaak is onduidelijk welke rol leeftijd daarbij precies speelt.

Dus:
- moet de overheid zorgen voor effectieve wetgeving tegen leeftijdsdiscriminatie bij de arbeid.
- moeten sociale partners in CAO's regelen dat op individueel niveau besloten kan worden tot op welke leeftijd en onder welke voorwaarden iemand kan en wil blijven werken.
- moet binnen bedrijven gewerkt worden aan bewustwording over en ombuiging van negatieve beeldvorming over oudere werknemers.
- moet de overheid als werkgever het goede voorbeeld geven bij het bestrijden van leeftijdsdiscriminatie bij de arbeid.

Leeftijd en leren
Bij een leven lang leren mag leeftijd geen belemmering zijn
De overgang tussen jong zijn, volwassen zijn en ouder of senior zijn wordt steeds vloeiender. In plaats van een standaard levensloop die gebaseerd is op de traditionele volgorde van leren als jongere, werken als volwassene en rusten als oudere ontstaat een grote variatie in arbeids- en leefpatronen. Leeftijdsgrenzen die voorheen vanzelfsprekend waren worden nu als beklemmend en discriminerend ervaren. Het ontstaan van een grotere diversiteit in levenslopen heeft tot gevolg dat leren een onderdeel van iedere levensfase is geworden en niet meer is voorbehouden aan de jeugd.

In de huidige complexe kennismaatschappij veranderen mensen met enige regelmaat van baan of functie. Bij-, na- en omscholing, functietraining en volwassenenonderwijs worden daarom steeds belangrijker.Het LBL is van mening dat iedereen zelf, ongeacht zijn of haar leeftijd, de keuze moet kunnen maken waar, hoe, wat en waarom er geleerd wordt. De huidige wet- en regelgeving is beperkend en demotiverend.

Volwassenen en ouderen moeten door middel van stimulerende maatregelen in staat gesteld worden om een eigen leerroute te kiezen. Dat betekent onder andere dat ook mensen van dertig jaar en ouder gebruik moeten kunnen maken van studiefinanciering en dat studiekosten voor ouderen fiscaal aftrekbaar moeten zijn. Het LBL is daarom voor een systeem waarbij iedereen in zijn leven de beschikking krijgt over een aantal leerrechten. Iedereen kan dan in zijn leven naar eigen keuze een leerroute kiezen die aansluit bij de eigen wensen en verwachtingen.

Leeftijd en internationale samenwerking
Leeftijdsdiscriminatie kent geen (lands-)grenzen.

De Europese eenwording is in volle gang en de tijd dat we in Nederland geen rekening hoefden te houden met internationale opvattingen ligt ver achter ons. Een groeiend Europees besef wordt aangegrepen om internationaal van elkaar te leren en ervaringen uit te wisselen. Met respect voor ieders eigenheid kan door middel van internationale samenwerking veel bereikt worden.

Het LBL juicht het toe dat de Europese Commissie een kaderrichtlijn over gelijke behandeling heeft vastgesteld op grond waarvan lidstaten wetgeving tegen leeftijdsdiscriminatie met betrekking tot de arbeid moeten maken. Het LBL stimuleert de noodzakelijke uitbreiding van deze kaderrichtlijn tot andere terreinen.
In Europa hebben we te maken met veel verschillende vormen van discriminatie. Internationale samenwerking richt zich daarom steeds meer op het bestrijden van met elkaar samenhangende non-discriminatiegronden, zoals seksuele geaardheid, gender, etniciteit, leeftijd en handicap. Het LBL is in Europees verband uniek als het gaat om het bijeenbrengen en beheren van kennis en ervaring met betrekking tot leeftijd als non-discriminatiegrond. Het bureau is internationaal dan ook een serieuze gesprekspartner waarmee rekening wordt gehouden.

Het LBL houdt ook bij het tot stand komen van Europese wet- en regelgeving de vinger aan de pols. Bovendien neemt het LBL keer op keer initiatieven tot Europese samenwerkingsprojecten om de door de Europese Unie vastgestelde non-discriminatiewetgeving in praktijk te brengen.

Leeftijd en de toegang tot goederen en diensten
Je bent nooit te oud of te jong om zelf te kiezen

De laatste decennia is de samenleving sterk geïndividualiseerd: burgers willen zelf kiezen voor de inrichting van hun leven en willen niet op grond van groepskenmerken in een bepaald hokje worden geplaatst. De levensloop van mensen is veel minder voorspelbaar dan in het verleden en dat uit zich in de wensen die mensen hebben op het gebied van huisvesting, financiële diensten, verzekeringen, onderwijs en dergelijke.Toch zijn er veel leeftijdsgrenzen die mensen in hun keuzevrijheid beperken.

Enkele voorbeelden daarvan zijn:
* Personen die particulier verzekerd zijn tegen ziektekosten worden vanaf hun 65e verplicht om de Standaard Pakket Polis te nemen die een relatief hoge premie heeft en die geen keuze voor een eigen risico kent.
* Als oudere personen reageren op 'goedkope' aanbiedingen van ziektekostenverzekeringen in de media merken ze dat die aanbieding vaak niet voor hen beschikbaar is.
* Jongeren onder de 24 jaar betalen een extra toeslag op hun autoverzekering en ook ouderen boven 65 of 70 jaar betalen een hogere premie.
* Bij leningen en persoonlijke kredieten gebruiken banken bij acceptatie een maximum leeftijd van 65 of 70 jaar.
* Bij treinreizen naar het buitenland worden soms verschillende tarieven gehanteerd die afhankelijk zijn van de leeftijd van de reiziger.
* In veel statuten worden leeftijdsgrenzen gesteld; bestuursleden mogen soms niet jonger zijn dan 18 jaar en niet ouder dan 70 en lid worden van een bepaalde vereniging kan niet als je jonger bent dan 50 of ouder dan 75 jaar.

De belangrijkste knelpunten zijn het uitsluiten van leeftijdsgroepen en het gebrek aan keuzevrijheid dat daarvan het gevolg is. Iedere maatschappelijke organisatie, verzekeraar, kredietverstrekker enz. voert zijn eigen beleid en bepaalt risico's op grond van onder andere leeftijd. Er wordt daarbij te weinig rekening gehouden met individuele verschillen tussen mensen.

Om leeftijdsdiscriminatie bij het aanbieden van goederen en diensten aan te pakken moet leeftijd in de Algemene Wet Gelijke Behandeling (AWGB) worden opgenomen.

Bron: http://www.leeftijd.nl/update/manifest%202002.html

Bijlage-extra 2 Once Upon a Water Planet

Today the Red Planet is dry and barren, but what about tomorrow? New data suggest that the long story of water on Mars isn't over yet.

March 12, 2002: When Orson Welles broadcast "The War of the Worlds" in 1938, many listeners were ready to believe in Martians. After all, astronomers had long debated markings on the Red Planet that might be aquaducts or fields of vegetation. Why not warlike aliens as well?

Among laypeople (and some scientists) the notion that Mars was Earth-like -- warm, wet and verdant -- persisted for decades, until the first spacecraft visited the Red Planet. The Mariner missions of the late 1960's revealed the real Mars: heavily cratered, dotted with extinct volcanoes, colder than Antarctica and drier than the Sahara desert. There were no trees, no canals, no Martians -- and very little atmosphere! "The War of the Worlds" was a fantasy after all.

This image by artist Duane Hilton is a fake! It shows a standing pool of water on Mars -- impossible today, but what of the future?

Subsequent missions mostly confirmed a new paradigm: Mars was once wet, but now it is dry. Spacecraft photos of Mars reveal signs of ancient rivers, lakes and maybe even an ocean. They might have been filled with water billions of years ago, but something happened -- no one knows what -- and the planet became a global desert.
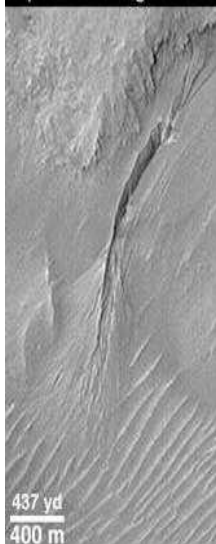
The accumulated debris (or "apron") from this gully on Mars covers sand dunes that may have formed less than a century ago.

Wherever the moisture went, new data suggest it might not be gone for good. Indeed, water may have flowed on Mars literally as recent as "yesterday or last year," declares James Garvin, Chief Scientist for Mars exploration at NASA headquarters. Evidence is mounting that water lies beneath the Martian terrain, he says. Furthermore, every few centuries weather conditions might become clement enough for that water to "come and go" on the surface as well.

see captionThe first hints of water near Mars' surface came in 2000 when the Mars Orbiter Camera (MOC) on board NASA's Mars Global Surveyor spacecraft spotted hundreds of delicately filigreed gully systems. Individual gullies are just 10 meters wide (earlier missions couldn't photograph such small features) and a whole system might cover only a dozen city blocks. Their sculpted terrain, cut-bank patterns, and fan-shaped accumulations of debris look hauntingly similar to flash-flood gully washes in deserts on Earth.

Dozens of the gully systems appear on the shaded sides of hills facing the polar ice caps. Their geometry suggests that "swimming-pool volumes of water could be entombed underground until suddenly it's warm enough for an ice plug to burst, letting all the water rush down the slopes," Garvin said.

Many of the gully systems look extraordinarily recent -- sharply carved and crossing older,

wind-scoured features. Their appearance is so fresh, in fact, that it has excited planetary geologists such as MOC designer Mike Malin to think that Mars "may have experienced massive, short-term climate changes, where water could come and go in hundreds of years." Indeed, Garvin said, scientists wonder whether liquid water might exist on Mars now, buried in some areas perhaps 500 meters underground, and that "there might be a dynamic cycling of the atmosphere going on even today."

MOC's findings are corroborated by data from another instrument on the spacecraft, the Mars Orbiter Laser Altimeter (MOLA). For 27 months -- longer than a Martian year (one Martian year is 687 Earth days) -- MOLA gauged the daily height of the Red Planet's polar icecaps, meticulously recording how much frozen material accumulated in winter and eroded (sublimed or evaporated) in summer in each hemisphere. MOLA documented that each ice cap has a volume as great as the Greenland ice cap on Earth.

Although the upper crust of frost is clearly carbon dioxide, scientists are now convinced that much of both caps' supporting mass must be frozen water--structurally, "dry ice can't stand up two miles high," Garvin remarked.

Depicting seasonal changes in the martian ice caps, as measured by the Mars Orbiter Laser Altimeter on board the Mars Global Surveyor spacecraft. The amplitude is exaggerated for illustrative purposes
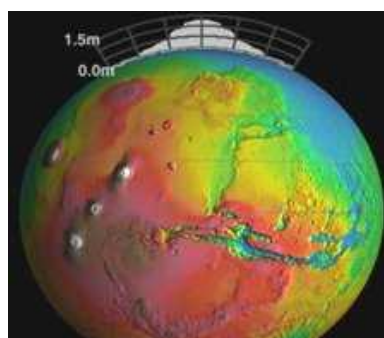
MOLA and MOC measured how the polar caps shrink in each hemisphere's summer. They shrink so much, in fact, that if the observed trends were continued for just a few centuries, nearly a third of each polar cap could evaporate into Mars's atmosphere. That would pump the atmospheric pressure up from 6 millibars to 30 or 40 mb (the Earth's atmospheric pressure is about 1000 mb) -- high enough pressure for liquid water to be stable on the planet's surface under certain temperature conditions. Thus, perhaps as recently as just a century or two ago, Mars might have been "clement enough for ponds of water" to have dotted its surface like desert oases, Garvin said -- and current trends suggest it might become so again.
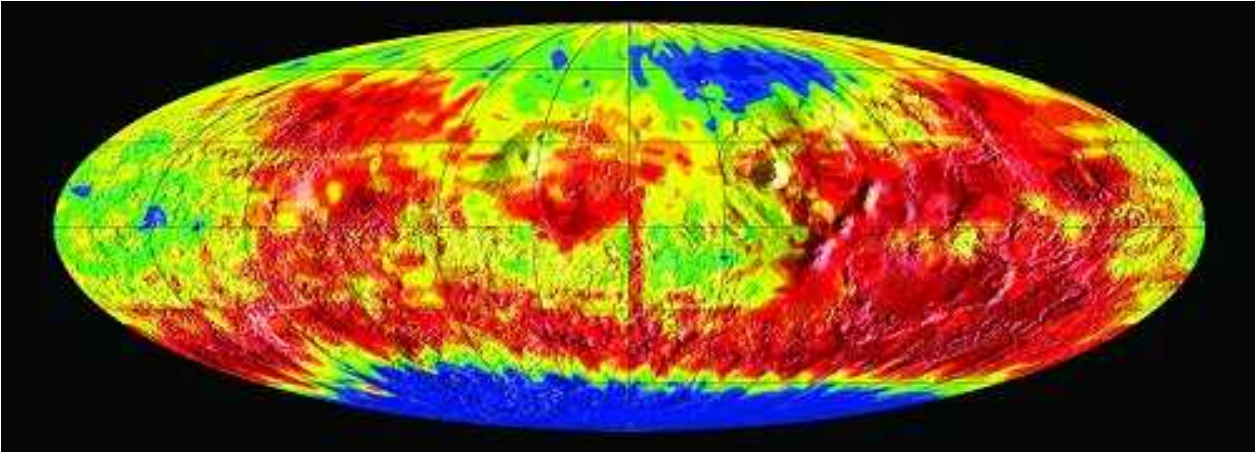
All these observations reopen a venerable question: was there -- or is there -- life on Mars?

"Following the water makes sense if you're prospecting for biology," Garvin declared. "If we could find evidence of preserved liquid water on Mars, that would be the Holy Grail."

Looking for water is in fact a prime mission of the Mars Odyssey spacecraft, whose high-gain antenna unfurled on February 6, 2002, and whose instruments began mapping Mars at the end of that month. Odyssey's multispectral camera is imaging Mars simultaneously at numerous infrared wavelengths (from 8 to 20 micrometers) with unprecedented football-field resolution, seeking thermal and mineral "fingerprints" hinting of seeps, volcanic vents, or underground reservoirs.

In this false-color map of Mars, soil enriched in hydrogen is indicated by deep blue. Source: the neutron spectrometer onboard NASA's 2001 Mars Odyssey spacecraft.

Initial science data released March 1 is already tantalizing scientists. Within its first week, Odyssey's gamma-ray spectrometer has detected significant amounts of hydrogen in Mars's south polar regions--possibly indicating the presence of frozen water in the upper few feet of the Martian soil.

"These preliminary Odyssey observations are the 'tip of the iceberg'," Garvin concluded. Perhaps he was speaking quite literally!

Bron: http://science.nasa.gov/headlines/y2002/12mar_waterplanet.htm?list495713

Bijlage-extra 3 Open-Source Software Opens New Windows to Third-World

Linux Community OSS (Open Source Software) is helping people around the globe escape the crime of software "piracy".

GNU/Linux, and tons of useful software that comes along with it, is clearly attracting interest from a range of quarters. From Pakistan to the UNDP, from Africa to Malaysia, and even in the Philippines or Thailand and Nepal, GNU/Linux is being closely watched, studied and adopted in a range of interesting experiments.

Created and propagated largely by volunteers, most of GNU/Linux's growth simply isn't based on giant billion-dollar spinning corporations that have the resources to promote its cause. So, such success stories from the Third World could largely go unnoticed.

In large parts of the world where the average per capita income is often less than the cost of a computer, the current phenomenal price of software turns millions into "pirates". In these parts of the globe, words such as free or low cost are not necessarily associated with low-quality, but offer to include millions who otherwise would be simply left out in the cold.

Because GNU/Linux is open source, there are no mountains of secrecy blocking replicability. So prices of the same fall to a point which is dramatically low compared to proprietary software and thus affordable to the millions.

For instance, a couple of hundred thousand copies of GNU/Linux have been distributed across India, through local popular computer magazines, at a price of just around $2. That includes both the cost of a slick magazine and CD. This software can, of course, be legally copied across as many computers as needed.

This being the case, is it surprising that there are interesting stories coming from varied corners of the Third World?

From Pakistan--Low-Cost Computers

Pakistan Ministry of Science and Technology advisor Salman Ansari says that some 50,000 low cost computers are to be installed in schools and colleges all over Pakistan. These will be PII computers, each being sourced for less than $100 a piece, he says.

Proprietary software for these PCs would cost a small fortune. Surely more than what the computers cost. But, using GNU/Linux ensures that the overall prices are kept low. Pakistan is seriously considering the use of StarOffice office as well, saving thousands of rupees over using more expensive and wholly proprietary office software.

"Don't be surprised if we become the first country in the world to say that all (government-run) services are going to be GNU/Linux based," Ansari says enthusiastically.
In Africa too

In Africa too, GNU/Linux is making its impact felt. Dakar (Senegal)-based Pierre Dandjinou

is ICT-D Policy Advisor for Africa. Says Dandjinou: "At one point, we got an idea to set up an Open Source Foundation for Africa. We are working on it."

He points to discussion list to discuss open source. South Africa's network is perhaps the most popular among the continent. Dandjinou, as ISOC (Internet Society) chairman for Benin, was able to organise a conference on this subject. UNDP has been experimenting with such technologies since 1994.

"Can African citizens be paying for all the proprietary software stuff?" he asks.

Besides, SNDP, the Sustainable Network Development Programme, which is a network promoted by the UN, itself uses Linux in some 47 countries worldwide.

But Dandjinou says: "I don't feel the cost (alone) is an issue. Of course, if you compare (the price of Open Source or Free Software products) with what we've been paying by using proprietary software packages, we have been paying really a lot of dollars. But more than price, what matters is the application development. The idea of the openness should be kept there. Openness and sharing... these are great values in themselves."

M. Thierry Hyacinthe Amoussougbo, the coordinator for the Cisco regional academy in Benin, says that enthusiasm about GNU/Linux is high, even if there are still practical problems in implementation.

Part of the problem is due to lack of technical skills to spread GNU/Linux sufficiently. Besides, the widespread predominance of pirated versions of proprietary operating systems makes the need for innovation and study of options a low-priority. "Everybody says let's go over to open source. But on the ground, it takes time to get started. It is being used by some, but is yet to be widely used," Amoussougbo admits.

"Linux is used for many servers. We too want to promote it and establish more Linux-based servers. But what moves on the ground level is still Microsoft... maybe without respect to copyright though," says Amoussougbo.

Spat in Malaysia

In Malaysia, in end-March, the Kuala Lumpur newspapers reported a verbal spat between the global software giant Microsoft and the fledging-but-influential Open Source movement in that country.

Tabloid daily The Star reported in its issue of March 26 that Microsoft (Malaysia) Sdn Bhd had "fired its first salvo against the Open Source movement in Malaysia" with an article sent out through its electronic newsletter and posted on its web site.

This article, "Not Quite an Open and Shut Case" (www.microsoft.com/malaysia/business/articles/linkpage3866.htm) was signed by Microsoft Malaysia managing director Butt Wai Choon. It argued that open-source software was "a threat to the commercial software industry". The Star, a popular Malaysian daily, noted however that the article "sounded familiar to a speech given by Jim Allchin to US lawmakers in Washington just a bit more than a year ago".

The Star also noted that in the last few months, both the Malaysian National Computer Confederation (MNCC) and the Association of the Computer and Multimedia Industry of

Malaysia (Pikom) have formed "special interest groups" devoted to the Open Source movement. MNCC is the national body of computer professionals, while Pikom is the industry trade association.

"Both bodies have announced or are considering initiatives to create greater awareness amongst business and government, of the benefits of using and adopting open-source solutions," reported The Star in an article by A. Asohan.

Unnamed industry sources were also quoted saying that one or two Malaysian government or semi-government bodies are studying the feasibility of developing Linux-- the Unix-based operating system that many consider the flagship of the OSS charge--into a "national operating system" like what's being undertaken with China's Red Flag project.

MNCC's member and security consultant Dinesh Nair was quoted saying: "In my opinion it [the article] indicates a growing concern that open source may be a threat to them locally." Nair also leads the technical sub-group of the MNCC's Open Source Special Interest Group.

"Only Mr. Butt can answer for certain [about the article's] timing... but it is true that at this moment in Malaysia, there is substantial interest in open source in both the private and public sectors," another MNCC-OSSIG member Dr Nah Soo Hoe, told the newspaper.

"Open source can be a threat to the commercial software model as practised currently by companies like Microsoft. Obviously, if you cannot charge a lot for your software, or hold users to ransom for upgrades and repeated purchases, you will tend to lose a lot of money if your business model is based on just this," he added.

But he went on to point out that it was possible to have a changed model that does not "rely so much on the actual purchase of software, but rather on the services needed to achieve the functionality the software offers, then whether you charge for the software is "not so important anymore", Dr Nah noted.

He said his fellow MNCC-OSSIG members believe that the open source model can in fact be a critical element towards making projects like Malaysia's ambitious Multimedia Super Corridor a success. The MSC is an ambitious ICT (Information & Communications Technology) initiative planned by the Malaysian government, to attract leading global companies to locate their multimedia industries alongside Kuala Lumpur). This dedicated corridor stretches 15km wide and 50km long, between the giant Petronas Twin Towers and the hi-tech Kuala Lumpur International Airport.

Open-source software, they argue, is even more important for a developing country like Malaysia.

"Access to source code will encourage and promote local capacities for software modification and redistribution," Dr. Nah was quoted as telling The Star in its special in.tech supplement (star-techcentral.com).

"It promotes an environment for technical and systems development, as well as the ability to learn, innovate and invent, while stimulating the local software industry. More importantly, it promotes independence from foreign software companies and reduces an outflow of funds from the country," he added.

Speaking to visiting participants of an UNDP/APDIP-organised Africa-Asia Workshop on ICT for Development, Ng Wan Peng a senior manager at the Multimedia Superior Corridor at Cyberjaya, the new township being built alongside Kuala Lumpur, says the Malaysian government is "very open" concerning using open-source software.

"We're considering using open source. What really matters is the total cost of ownership, including the other costs that come along with it. Wherever possible, we would like to use it," says Peng.

In other ways too, Malaysia is giving open-source and free software a close look. Take the case of MIMOS (www.mimos.my), the Malaysian Institute of Micro Electronic Systems, which is intended to grow into a premier R&D powerhouse in this South-East Asian country.

"MIMOS has lots of our programmes running on open source," says Dr Raslan Bin Ahmad of MIMOS Berhad. MIMOS is one of the key pillars in taking this country towards becoming a K-society and K-economy (based on knowledge) and turn into a 'developed country' by the year 2020.

In its e-world section, MIMOS showcases projects like its attempt to build a low-cost PC that is "affordable to everybody". This computer is based on GNU/Linux and and is expected to cost far less than what it costs to buy a PC in the market.

"Infoniti" ("infinite" plus "information") is being built up as a handy web device "that makes accessing the web as easy as using a TV or VCR". Both inexpensive and friendly to use, this device would, hopefully, "cross the digital divide separating computer phobics from computer literates". Its promoters say it aims to help "all Malaysians" improve their quality of life through the "power of information".

Philippines and Thailand

Says Emmanuel Lallana of the E-ASEAN Task Force based in Manila: "It makes sense to use open standards and open source. We don't want to get locked into proprietary software. You can use Open Source also because it's cheaper. Why pay for an operating system and office suite, when you have people giving it out for free?"

In Thailand, the ambitious SchoolNet experiment--an initiative that seeks to provide universal access to teachers and students in schools in that East Asian country -- also taps into the power of GNU/Linux.

It has developed a Linux School Internet Server (Linux SIS) to be promoted and distributed to schools "as a cheaper alternative to using an expensive server software".

"Since its introduction, Linux-SIS has been very popular in Thailand due to its excellent documentation in the Thai language, its simple-to-install CD-ROM and web-based server management without the need to know UNIX commands," says Dr Thaweesak 'Hugh' Koanantakool, director of Bangkok's National Electronics and Computer Technology Centre (NECTEC).
SIS training courses are always in constant demand from schools looking for a reliable Internet server at the "lowest cost", says he. (More information on the Linux-SIS is available at www.nectec.or.th/linux-sis/) Some of the pages are in the Thai language.

South Asian Schools

News reports have recently focused on GNU/Linux initiatives in classrooms from different corners of the globe.

Of particular interest are those coming up from the Third World. Including Ganesha's Project in Nepal, a plan using donated machines and open-source software like Linux, in a move to cut the costs of acquiring software licenses for "an already impoverished school system".

In Goa, a former Portuguese colony on the west coast of India, after struggling for years to get discounts from Microsoft software for use in their schools, the Goa Schools Computers Project (GSCP) got a windfall. Red Hat offered not just a chance to reproduce their software over any number of computers, but also some training for school-teachers on the basics of GNU/Linux. Goa's unit of the India Linux Users' Group has also volunteered to support this project. (See the group overcoming their teething trouble at www.groups.yahoo.com/group/gscp or visit the background details of the project.)

Goa is one of India's smallest states (population 1.35 million; area 3700 sq.km). But this small experience showing what can be done inspired other GNU/Linux networks in other parts of India, where some groups are rather active, particularly in the bigger cities.

These are all significant ventures. Some are small; others are more ambitious. But there are lessons for everyone who can emulate and adapt some of these interesting ventures from all across the Third World.

Bron: http://www.linuxjournal.com/article.php?sid=6049

Bijlage-extra 4 Peru and Open Source

Lima, 8th of April, 2002
To: Señor JUAN ALBERTO GONZÁLEZ
General Manager of Microsoft, Perú

Dear Sir:

First of all, I thank you for your letter of March 25, 2002 in which you state the official position of Microsoft relative to Bill Number 1609, Free Software in Public Administration, which is indubitably inspired by the desire for Peru to find a suitable place in the global technological context. In the same spirit, and convinced that we will find the best solutions through an exchange of clear and open ideas, I will take this opportunity to reply to the commentaries included in your letter.

While acknowledging that opinions such as yours constitute a significant contribution, it would have been even more worthwhile for me if, rather than formulating objections of a general nature (which we will analyse in detail later) you had gathered solid arguments for the advantages that proprietary software could bring to the Peruvian State, and to its citizens in general, since this would have allowed a more enlightening exchange in respect of each of our positions.

With the aim of creating an orderly debate, we will assume that what you call "open source software" is what the Bill defines as "free software", since there exists software for which the source code is distributed together with the program, but which does not fall within the definition established by the Bill; and that what you call "commercial software" is what the Bill defines as "proprietary" or "unfree", given that there exists free software which is sold in the market for a price like any other good or service.

It is also necessary to make it clear that the aim of the Bill we are discussing is not directly related to the amount of direct savings that can by made by using free software in state institutions. That is in any case a marginal aggregate value, but in no way is it the chief focus of the Bill. The basic principles which inspire the Bill are linked to the basic guarantees of a state of law, such as:

Free access to public information by the citizen.
Permanence of public data.
Security of the State and citizens.

To guarantee the free access of citizens to public information, it is indispensable that the encoding of data is not tied to a single provider. The use of standard and open formats gives a guarantee of this free access, if necessary through the creation of compatible free software.

To guarantee the permanence of public data, it is necessary that the usability and maintenance of the software does not depend on the goodwill of the suppliers, or on the monopoly conditions imposed by them. For this reason the State needs systems the development of which can be guaranteed due to the availability of the source code.

To guarantee national security or the security of the State, it is indispensable to be able to

rely on systems without elements which allow control from a distance or the undesired transmission of information to third parties. Systems with source code freely accessible to the public are required to allow their inspection by the State itself, by the citizens, and by a large number of independent experts throughout the world. Our proposal brings further security, since the knowledge of the source code will eliminate the growing number of programs with *spy code*.

In the same way, our proposal strengthens the security of the citizens, both in their role as legitimate owners of information managed by the state, and in their role as consumers. In this second case, by allowing the growth of a widespread availability of free software not containing *spy code* able to put at risk privacy and individual freedoms.

In this sense, the Bill is limited to establishing the conditions under which the state bodies will obtain software in the future, that is, in a way compatible with these basic principles.

From reading the Bill it will be clear that once passed:
- the law does not forbid the production of proprietary software
- the law does not forbid the sale of proprietary software
- the law does not specifiy which concrete software to use
- the law does not dictate the supplier from whom software will be bought
- the law does not limit the terms under which a software product can be licensed.

What the Bill does express clearly, is that, for software to be acceptable for the state it is not enough that it is technically capable of fulfilling a task, but that further the contractual conditions must satisfy a series of requirements reguarding the license, without which the State cannot guarantee the citizen adequate processing of his data, watching over its integrity, confidentiality, and accessibility throughout time, as these are very critical aspects for its normal functioning.

We agree, Mr. Gonzalez, that information and communication technology have a significant impact on the quality of life of the citizens (whether it be positive or negative). We surely also agree that the basic values I have pointed out above are fundamental in a democratic state like Peru. So we are very interested to know of any other way of guaranteeing these principles, other than through the use of free software in the terms defined by the Bill.

As for the observations you have made, we will now go on to analyse them in detail:

Firstly, you point out that: "1. The bill makes it compulsory for all public bodies to use only free software, that is to say open source software, which breaches the principles of equality before the law, that of non-discrimination and the right of free private enterprise, freedom of industry and of contract, protected by the constitution."

This understanding is in error. The Bill in no way affects the rights you list; it limites itself entirely to establishing conditions for the use of software on the part of state institutions, without in any way meddling in private sector transactions. It is a well established principle that the State does not enjoy the wide spectrum of contractual freedom of the private sector, as it is limited in its actions precisely by the requirement for transparency of public acts; and in this sense, the preservation of the greater common interest must prevail when legislating on the matter.

The Bill protects equality under the law, since no natural or legal person is excluded from

the right of offering these goods to the State under the conditions defined in the Bill and without more limitations than those established by the Law of State Contracts and Purchasing (T.U.O. por Decreto Supremo No. 012-2001-PCM).

The Bill does not introduce any discrimination whatever, since it only establishes *how* the goods have to be provided (which is a state power) and not *who* has to provide them (which would effectively be discriminatory, if restrictions based on national origin, race religion, ideology, sexual preference etc. were imposed). On the contrary, the Bill is decidedly antidiscriminatory. This is so because by defining with no room for doubt the conditions for the provision of software, it prevents state bodies from using software which has a license including discriminatory conditions.

It should be obvious from the preceding two paragraphs that the Bill does not harm free private enterprise, since the latter can always choose under what conditions it will produce software; some of these will be acceptable to the State, and others will not be since they contradict the guarantee of the basic principles listed above. This free initiative is of course compatible with the freedom of industry and freedom of contract (in the limited form in which the State can exercise the latter). Any private subject can produce software under the conditions which the State requires, or can refrain from doing so. Nobody is forced to adopt a model of production, but if they wish to provide software to the State, they must provide the mechanisms which guarantee the basic principles, and which are those described in the Bill.

By way of an example: nothing in the text of the Bill would prevent your company offering the State bodies an office "suite", under the conditions defined in the Bill and setting the price that you consider satisfactory. If you did not, it would not be due to restrictions imposed by the law, but to business decisions relative to the method of commercializing your products, decisions with which the State is not involved.

To continue; you note that:" 2. The bill, by making the use of open source software compulsory, would establish discriminatory and non competitive practices in the contracting and purchasing by public bodies..."

This statement is just a reiteration of the previous one, and so the response can be found above. However, let us concern ourselves for a moment with your comment regarding "non-competitive ... practices."

Of course, in defining any kind of purchase, the buyer sets conditions which relate to the proposed use of the good or service. From the start, this excludes certain manufacturers from the possibility of competing, but does not exclude them "a priori", but rather based on a series of principles determined by the autonomous will of the purchaser, and so the process takes place in conformance with the law. And in the Bill it is established that *no-one* is excluded from competing as far as he guarantees the fullfilment of the basic principles.

Furthermore, the Bill *stimulates* competition, since it tends to generate a supply of software with better conditions of usability, and to better existing work, in a model of continuous improvement.

On the other hand, the central aspect of competivity is the chance to provide better choices to the consumer. Now, it is impossible to ignore the fact that marketing does not play a neutral role when the product is offered on the market (since accepting the opposite

would lead one to suppose that firms' expenses in marketing lack any sense), and that therefore a significant expense under this heading can influence the decisions of the purchaser. This influence of marketing is in large measure reduced by the bill that we are backing, since the choice within the framework proposed is based on the *technical merits* of the product and not on the effort put into commercialization by the producer; in this sense, competitvity is increased, since the smallest software producer can compete on equal terms with the most powerful corporations.

It is necessary to stress that there is no position more anti-competitive than that of the big software producers, which frequently abuse their dominant position, since in innumerable cases they propose as a solution to problems raised by users: "update your software to the new version" (at the user's expense, naturally); furthermore, it is common to find arbitrary cessation of technical help for products, which, in the provider's judgement alone, are "old"; and so, to receive any kind of technical assistance, the user finds himself forced to migrate to new versions (with non-trivial costs, especially as changes in hardware platform are often involved). And as the whole infrastructure is based on proprietary data formats, the user stays "trapped" in the need to continue using products from the same supplier, or to make the huge effort to change to another environment (probably also proprietary).

You add: "3. So, by compelling the State to favour a business model based entirely on open source, the bill would only discourage the local and international manufacturing companies, which are the ones which really undertake important expenditures, create a significant number of direct and indirect jobs, as well as contributing to the GNP, as opposed to a model of open source software which tends to have an ever weaker economic impact, since it mainly creates jobs in the service sector."

I do not agree with your statement. Partly because of what you yourself point out in paragraph 6 of your letter, regarding the relative weight of services in the context of software use. This contradiction alone would invalidate your position. The service model, adopted by a large number of companies in the software industry, is much larger in economic terms, and with a tendency to increase, than the licensing of programs.

On the other hand, the private sector of the economy has the widest possible freedom to choose the economic model which best suits its interests, even if this freedom of choice is often obscured subliminally by the disproportionate expenditure on marketing by the producers of proprietary software.

In addition, a reading of your opinion would lead to the conclusion that the State market is crucial and essential for the proprietary software industry, to such a point that the choice made by the State in this bill would completely eliminate the market for these firms. If that is true, we can deduce that the State must be subsidising the proprietary software industry. In the unlikely event that this were true, the State would have the right to apply the subsidies in the area it considered of greatest social value; it is undeniable, in this improbable hypothesis, that if the State decided to subsidize software, it would have to do so choosing the free over the proprietary, considering its social effect and the rational use of taxpayers money.

In respect of the jobs generated by proprietary software in countries like ours, these mainly concern technical tasks of little aggregate value; at the local level, the technicians who provide support for proprietary software produced by transnational companies do not have the possibility of fixing bugs, not necessarily for lack of technical capability or of

talent, but because they do not have access to the source code to fix it. With free software one creates more technically qualified employment and a framework of free competence where success is only tied to the ability to offer good technical support and quality of service, one stimulates the market, and one increases the shared fund of knowledge, opening up alternatives to generate services of greater total value and a higher quality level, to the benefit of all involved: producers, service organizations, and consumers.

It is a common phenomenon in developing countries that local software industries obtain the majority of their takings in the service sector, or in the creation of "ad hoc" software. Therefore, any negative impact that the application of the Bill might have in this sector will be more than compensated by a growth in demand for services (as long as these are carried out to high quality standards). If the transnational software companies decide not to compete under these new rules of the game, it is likely that they will undergo some decrease in takings in terms of payment for licences; however, considering that these firms continue to allege that much of the software used by the State has been illegally copied, one can see that the impact will not be very serious. Certainly, in any case their fortune will be determined by market laws, changes in which cannot be avoided; many firms traditionally associated with proprietary software have already set out on the road (supported by copious expense) of providing services associated with free software, which shows that the models are not mutually exclusive.

With this bill the State is deciding that it needs to preserve certain fundamental values. And it is deciding this based on its sovereign power, without affecting any of the constitutional guarantees. If these values could be guaranteed without having to choose a particular economic model, the effects of the law would be even more beneficial. In any case, it should be clear that the State does not choose an economic model; if it happens that there only exists one economic model capable of providing software which provides the basic guarantee of these principles, this is because of historical circumstances, not because of an arbitrary choice of a given model.

Your letter continues: "4. The bill imposes the use of open source software without considering the dangers that this can bring from the point of view of security, guarantee, and possible violation of the intellectual property rights of third parties."

Alluding in an abstract way to "the dangers this can bring", without specifically mentioning a single one of these supposed dangers, shows at the least some lack of knowledge of the topic. So, allow me to enlighten you on these points.

On security:

National security has already been mentioned in general terms in the initial discussion of the basic principles of the bill. In more specific terms, relative to the security of the software itself, it is well known that all software (whether proprietary or free) contains errors or "bugs" (in programmers' slang). But it is also well-known that the bugs in free software are fewer, and are fixed much more quickly, than in proprietary software. It is not in vain that numerous public bodies reponsible for the IT security of state systems in developed countries require the use of free software for the same conditions of security and efficiency.

What is impossible to prove is that proprietary software is more secure than free, without the public and open inspection of the scientific community and users in general. This demonstration is impossible because the model of proprietary software itself prevents this analysis, so that any guarantee of security is based only on promises of good intentions (biased, by any reckoning) made by the producer itself, or its contractors.

It should be remembered that in many cases, the licensing conditions include Non-Disclosure clauses which prevent the user from publicly revealing security flaws found in the licensed proprietary product.

In respect of the guarantee:

As you know perfectly well, or could find out by reading the "End User License Agreement" of the products you license, in the great majority of cases the guarantees are limited to replacement of the storage medium in case of defects, but in no case is compensation given for direct or indirect damages, loss of profits, etc... If as a result of a security bug in one of your products, not fixed in time by yourselves, an attacker managed to compromise crucial State systems, what guarantees, reparations and compensation would your company make in accordance with your licencing conditions? The guarantees of proprietary software, inasmuch as programs are delivered ``AS IS'', that is, in the state in which they are, with no additional responsibility of the provider in respect of function, in no way differ from those normal with free software.

On Intellectual Property:

Questions of intellectual property fall outside the scope of this bill, since they are covered by specific other laws. The model of free software in no way implies ignorance of these laws, and in fact the great majority of free software is covered by copyright. In reality, the inclusion of this question in your observations shows your confusion in respect of the legal framework in which free software is developed. The inclusion of the intellectual property of others in works claimed as one's own is not a practice that has been noted in the free software community; whereas, unfortunately, it has been in the area of proprietry software. As an example, the condemnation by the Commercial Court of Nanterre, France, on 27th September 2001 of Microsoft Corp. to a penalty of 3 million francs in damages and interest, for violation of intellectual property (piracy, to use the unfortunate term that your firm commonly uses in its publicity).

You go on to say that: "The bill uses the concept of open source software incorrectly, since it does not necessarily imply that the software is free or of zero cost, and so arrives at mistaken conclusions regarding State savings, with no cost-benefit analysis to validate its position."

This observation is wrong; in principle, freedom and lack of cost are orthogonal concepts: there is software which is proprietary and charged for (for example, MS Office), software which is proprietary and free of charge (MS Internet Explorer), software which is free and charged for (RedHat, SuSE etc Gnu/Linux distributions), software which is free and not charged for (Apache, OpenOffice, Mozilla), and even software which can be licensed in a range of combinations (MySQL).

Certainly free software is not necessarily free of charge. And the text of the bill does not state that it has to be so, as you will have noted after reading it. The definitions included in the Bill state clearly *what* should be considered free software, at no point referring to freedom from charges. Although the possibility of savings in payments for proprietary software licenses are mentioned, the foundations of the bill clearly refer to the fundamental guarantees to be preserved and to the stimulus to local technological development. Given that a democratic State must support these principles, it has no other choice than to use software with publicly available source code, and to exchange information only in standard formats.

If the State does not use software with these characteristics, it will be weakening basic republican principles. Luckily, free software also implies lower total costs; however, even given the hypothesis (easily disproved) that it was more expensive than proprietary software, the simple existence of an effective free software tool for a particular IT function would oblige the State to use it; not by command of this Bill, but because of the basic principles we enumerated at the start, and which arise from the very essence of the lawful democratic State.

You continue: "6. It is wrong to think that Open Source Software is free of charge. Research by the Gartner Group (an important investigator of the technological market recognized at world level) has shown that the cost of purchase of software (operating system and applications) is only 8% of the total cost which firms and institutions take on for a rational and truely beneficial use of the technology. The other 92% consists of: installation costs, enabling, support, maintenance, administration, and down-time."

This argument repeats that already given in paragraph 5 and partly contradicts paragraph 3. For the sake of brevity we refer to the comments on those paragraphs. However, allow me to point out that your conclusion is logically false: even if according to Gartner Group the cost of software is on average only 8% of the total cost of use, this does not in any way deny the existence of software which is free of charge, that is, with a licensing cost of zero.

In addition, in this paragraph you correctly point out that the service components and losses due to down-time make up the largest part of the total cost of software use, which, as you will note, contradicts your statement regarding the small value of services suggested in paragraph 3. Now the use of free software contributes significantly to reduce the remaining life-cycle costs. This reduction in the costs of installation, support etc. can be noted in several areas: in the first place, the competitive service model of free software, support and maintenance for which can be freely contracted out to a range of suppliers competing on the grounds of quality and low cost. This is true for installation, enabling, and support, and in large part for maintenance. In the second place, due to the reproductive characteristics of the model, maintenance carried out for an application is easily replicable, without incurring large costs (that is, without paying more than once for the same thing) since modifications, if one wishes, can be incorporated in the common

fund of knowledge. Thirdly, the huge costs caused by non-functioning software ("blue screens of death", malicious code such as virus, worms, and trojans, exceptions, general protection faults and other well-known problems) are reduced considerably by using more stable software; and it is well-known that one of the most notable virtues of free software is its stability.

ou further state that: "7. One of the arguments behind the bill is the supposed freedom from costs of open-source software, compared with the costs of commercial software, without taking into account the fact that there exist types of volume licensing which can be highly advantageous for the State, as has happened in other countries."

I have already pointed out that what is in question is not the cost of the software but the principles of freedom of information, accessibility, and security. These arguments have been covered extensively in the preceding paragraphs to which I would refer you.

On the other hand, there certainly exist types of volume licensing (although unfortunately proprietary software does not satisfy the basic principles). But as you correctly pointed out in the immediately precding paragraph of your letter, they only manage to reduce the impact of a component which makes up no more than 8% of the total.

You continue: "8. In addition, the alternative adopted by the bill (i) is clearly more expensive, due to the high costs of software migration, and (ii) puts at risk compatibility and interoperability of the IT platforms within the State, and between the State and the private sector, given the hundreds of versions of open source software on the market."

Let us analyze your stament in two parts. Your first argument, that migration implies high costs, is in reality an argument in favour of the Bill. Because the more time goes by, the more difficult migration to another technology will become; and at the same time, the security risks associated with proprietary software will continue to increase. In this way, the use of proprietary systems and formats will make the State ever more dependent on specific suppliers. Once a policy of using free software has been established (which certainly, does imply some cost) then on the contrary migration from one system to another becomes very simple, since all data is stored in open formats. On the other hand, migration to an open software context implies no more costs than migration between two different proprietary software contexts, which invalidates your argument completely.

The second argument refers to "problems in interoperability of the IT platforms within the State, and between the State and the private sector" This statement implies a certain lack of knowledge of the way in which free software is built, which does not maximize the dependence of the user on a particular platform, as normally happens in the realm of proprietary software. Even when there are multiple free software distributions, and numerous programs which can be used for the same function, interoperability is guaranteed as much by the use of standard formats, as required by the bill, as by the possibility of creating interoperable software given the availability of the source code.

You then say that: "9. The majority of open source code does not offer adequate levels of service nor the guarantee from recognized manufacturers of high productivity on the part of the users, which has led various public organizations to retract their decision to go with an open source software solution and to use commercial software in its place."

This observation is without foundation. In respect of the guarantee, your argument was

rebutted in the response to paragraph 4. In respect of support services, it is possible to use free software without them (just as also happens with proprietary software), but anyone who does need them can obtain support separately, whether from local firms or from international corporations, again just as in the case of proprietary software.

On the other hand, it would contribute greatly to our analysis if you could inform us about free software projects *established* in public bodies which have already been abandoned in favour of proprietary software. We know of a good number of cases where the opposite has taken place, but not know of any where what you describe has taken place.

You continue by observing that: "10. The bill demotivates the creativity of the peruvian software industry, which invoices 40 million US$/year, exports 4 million US$ (10th in ranking among non-traditional exports, more than handicrafts) and is a source of highly qualified employment. With a law that incentivates the use of open source, software programmers lose their intellectual property rights and their main source of payment."

It is clear enough that nobody is forced to commercialize their code as free software. The only thing to take into account is that if it is not free software, it cannot be sold to the public sector. This is not in any case the main market for the national software industry. We covered some questions referring to the influence of the Bill on the generation of employment which would be both highly technically qualified and in better conditions for competition above, so it seems unnecessary to insist on this point.

What follows in your statement is incorrect. On the one hand, no author of free software loses his intellectual property rights, unless he expressly wishes to place his work in the public domain. The free software movement has always been very respectful of intellectual property, and has generated widespread public recognition of authors. Names like those of Richard Stallman, Linus Torvalds, Guido van Rossum, Larry Wall, Miguel de Icaza, Andrew Tridgell, Theo de Raadt, Andrea Arcangeli, Bruce Perens, Darren Reed, Alan Cox, Eric Raymond, and many others, are recognized world-wide for their contributions to the development of software that is used today by millions of people throughout the world. On the other hand, to say that the rewards for authors rights make up the main source of payment of Peruvian programmers is in any case a guess, in particular since there is no proof to this effect, nor a demonstration of how the use of free software by the State would influence these payments.

You go on to say that: "11. Open source software, since it can be distributed without charge, does not allow the generation of income for its developers through exports. In this way, the multiplier effect of the sale of software to other countries is weakened, and so in turn is the growth of the industry, while Government rules ought on the contrary to stimulate local industry."

This statement shows once again complete ignorance of the mechanisms of and market for free software. It tries to claim that the market of sale of non- exclusive rights for use (sale of licences) is the only possible one for the software industry, when you yourself pointed out several paragraphs above that it is not even the most important one. The incentives that the bill offers for the growth of a supply of better qualified professionals, together with the increase in experience that working on a large scale with free software within the State will bring for Peruvian technicians, will place them in a highly competitive position to offer their services abroad.

You then state that: "12. In the Forum, the use of open source software in education was

discussed, without mentioning the complete collapse of this initiative in a country like Mexico, where precisely the State employees who founded the project now state that open source software did not make it possible to offer a learning experience to pupils in the schools, did not take into account the capability at a national level to give adequate support to the platform, and that the software did not and does not allow for the levels of platform integration that now exist in schools."

In fact Mexico has gone into reverse with the Red Escolar (Schools Network) project. This is due precisely to the fact that the driving forces behind the mexican project used license costs as their main argument, instead of the other reasons specified in our project, which are far more essential. Because of this conceptual mistake, and as a result of the lack of effective support from the SEP (Secretary of State for Public Education), the assumption was made that to implant free software in schools it would be enough to drop their software budget and send them a CD ROM with Gnu/Linux instead. Of course this failed, and it couldn't have been otherwise, just as school laboratories fail when they use proprietary software and have no budget for implementation and maintenance. That's exactly why our bill is not limited to making the use of free software mandatory, but recognizes the need to create a viable migration plan, in which the State undertakes the technical transition in an orderly way in order to then enjoy the advantages of free software.

You end with a rhetorical question: "13. If open source software satisfies all the requirements of State bodies, why do you need a law to adopt it? Shouldn't it be the market which decides freely which products give most benefits or value?"

We agree that in the private sector of the economy, it must be the market that decides which products to use, and no state interference is permissible there. However, in the case of the public sector, the reasoning is not the same: as we have already established, the state archives, handles, and transmits information which does not belong to it, but which is entrusted to it by citizens, who have no alternative under the rule of law. As a counterpart to this legal requirement, the State must take extreme measures to safeguard the integrity, confidentiality, and accessibility of this information. The use of proprietary software raises serious doubts as to whehter these requirements can be fulfilled, lacks conclusive evidence in this respect, and so is not suitable for use in the public sector.

The need for a law is based, firstly, on the realization of the fundamental principles listed above in the specific area of software; secondly, on the fact that the State is not an ideal homogoneous entity, but made up of multiple bodies with varying degrees of autonomy in decision making. Given that it is inappropriate to use proprietary software, the fact of establishing these rules in law will prevent the personal discretion of any state employee from putting at risk the information which belongs to citizens. And above all, because it constitutes an up-to-date reaffirmation in relation to the means of management and communication of information used today, it is based on the republican principle of openness to the public.

In conformance with this universally accepted principle, the citizen has the right to know all information held by the State and not covered by well-founded declarations of secrecy based on law. Now, software deals with information and is itself information. Information in a special form, capable of being interpreted by a machine in order to execute actions, but crucial information all the same because the citizen has a legitimate right to know, for example, how his vote is computed or his taxes calculated. And for that he must have free access to the source code and be able to prove to his satisfaction the programs used for

electoral computations or calculation of his taxes.

I wish you the greatest respect, and would like to repeat that my office will always be open for you to expound your point of view to whatever level of detail you consider suitable.

Cordially,
DR. EDGAR DAVID VILLANUEVA NUÑEZ
Congressman of the Republica of Perú.

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