



# Open Source, Open Standards: Turning the Digital Divide into Digital Dividends

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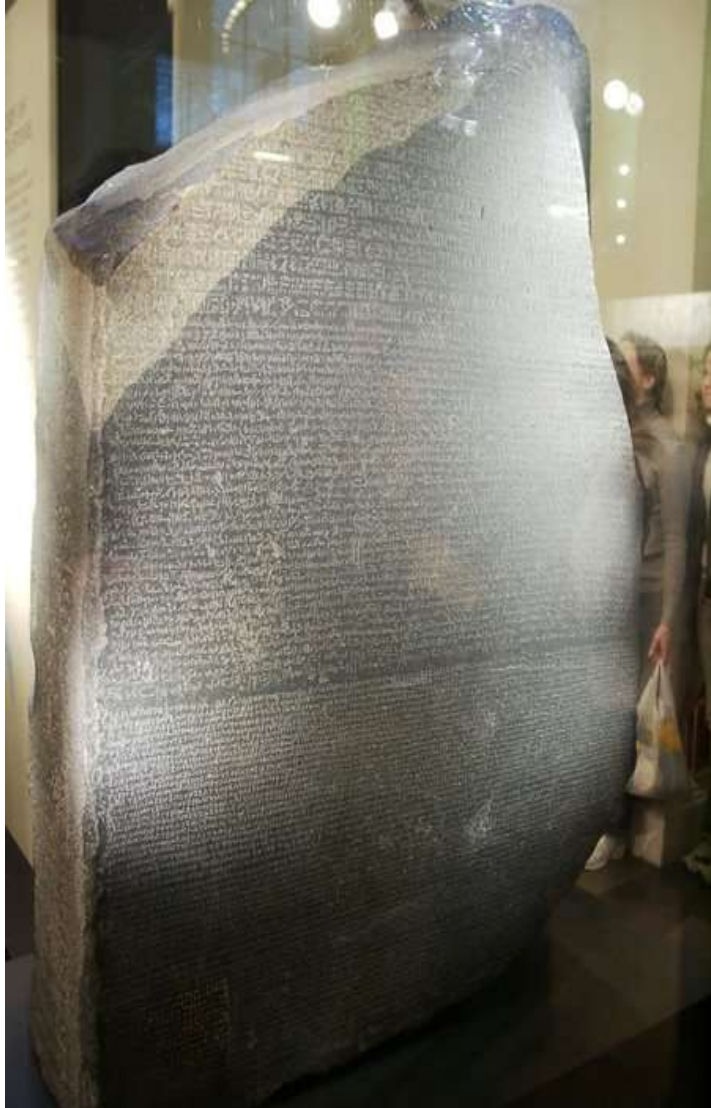
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## E-governance – what is that all about?

- The ability to ***effectively*** use technology to engage with the citizens of the country
- Governments ***do not*** have the luxury to ***choose*** the customers they want to deal with
- Governments, as custodians of the nation's data bank, have an even greater responsibility to ensure ***longevity*** of data collected

# The Rosetta Stone



The *Rosetta Stone* is a dark granite stone which provided modern researchers with translations of ancient text in Egyptian demotic script, Greek, and Egyptian hieroglyphs. Because Greek was well known, the stone was the key to deciphering the hieroglyphs in 1822 by Jean-François Champollion, and in 1823 by Thomas Young. The discovery facilitated translation of other hieroglyphic texts.

# E-governance – data independence



- Do we need a *Rosetta Stone* for finding out what was created in the late 20<sup>th</sup> and early 21<sup>st</sup> century?
- E-governance *must* include a clause that mandates the publishing of the data formats of all documents that are part of the data store

# Let's talk about babies

- Specifically, milk for babies
- UNICEF UK Baby Friendly Initiative on “The Infant Formula and Follow-on Formula Regulations 1995”<sup>[1]</sup> states:
  - *“No manufacturer or distributor of any infant formula shall provide for promotional purposes any infant formula free or at a reduced or discounted price, or any gift designed to promote the sale of an infant formula, to -*
    - *1. the general public;*
    - *2. pregnant women;*
    - *3. mothers; ...”*

[1] <http://www.babyfriendly.org.uk/uklaw.asp>

# And what about the tobacco companies?

- In China, Philip Morris sponsored giveaways where consumers traded in empty cigarette packs for rucksacks, lighters and other goods with the Marlboro logo. The company was caught mailing promotional materials to minors even though it claimed the giveaways were for adults.
- One study found that 10% of Sri Lankan children have an object with a cigarette brand logo.
- In Malaysia, tobacco firms have sponsored movie ticket giveaways as well as television shows such as the "Dunhill Double" and "Perilleys 25" action films.

and it relates to Open Source because ...

- Is it OK to accept “gifts” of software that create a dependency? Calling it addiction might not be fair, but helps start the dialogue
- By all means, accept the “gift” - but put the condition that if that “gift” creates outputs that could be stored for retrieval later, that the formats of these outputs be published and made public along with full and free access – AND not on RAND (reasonable and non-discriminatory) terms

# Should RSA's algorithm be patented?

Letter to the Commissioner of the United States Patent Office

From Professor Donald Knuth

[ ... ]

In the period 1945-1980, it was ***generally believed that patent law did not pertain to software.*** However, it now appears that some people have received patents for algorithms of practical importance—e.g., Lempel-Ziv compression and RSA public key encryption--and are now legally preventing other programmers from using these algorithms.

... It certainly would have had a profoundly negative effect on my own work: For example, I developed software called TeX that is now used to produce more than 90% of all books and journals in mathematics and physics and to produce hundreds of thousands of technical reports in all scientific disciplines. ***If software patents had been commonplace in 1980, I would not have been able to create such a system, nor would I probably have ever thought of doing it, nor can I imagine anyone else doing so.***

... I am told that the courts are trying to make a distinction between mathematical algorithms and non-mathematical algorithms. To a computer scientist, this makes no sense, because every algorithm is as mathematical as anything could be. ***An algorithm is an abstract concept unrelated to physical laws of the universe.***

[ ... ]

# Digital Divide to Digital Dividends

- We need to
  - tackle “piracy”
  - lack of access to IT
  - ensure that the IT revolution does not bypass developing countries
- It is ***never*** always about cost, it is really about being presented with ***opportunities***
- ***Opportunities from open source businesses*** are where the digital dividends will come from

# Smoke and Mirrors using “Piracy”

- Tackling “piracy”:
  - piracy is a symptom of supply not meeting demand
  - it is in the interest of the proprietary vendors to “promote piracy”, despite what they publicly state
  - I challenge the “piracy” police to go and raid/arrest home users
  - they will have some “showcase” arrests to instill fear

# Something To Think About

- August 25, 2004, the Malaysian police raided a “pirate software shop” in Kuala Lumpur
- They confiscated Red Hat and FreeBSD CDs among others



Photo from *The Star*, August 26, 2004

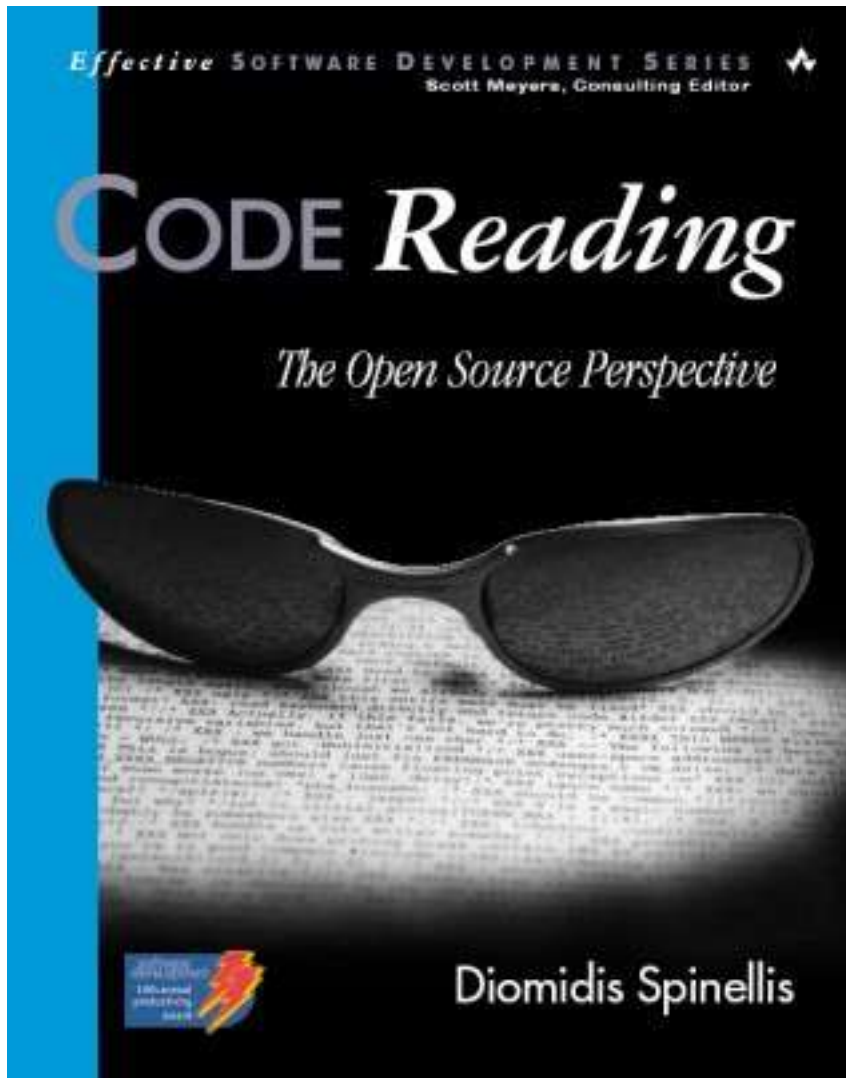
## Remember the early PCs?

- They came with a built-in BASIC interpreter
- What that allowed is the early users were able to start writing code
- Today's “bundled proprietary OS” PCs are devoid of anything that's developer focused
- But, if the system came instead with FOSS, one could learn to write software
- The digital divide was created by unethical business practices and the emerging economies have 20-20 hindsight to do it right

# Nobel Prize for Literature

- Nobel laureates for literature did not win it by just learning a language's spelling, syntax and grammar and churning out a manuscript
- They had to read wide and extensively
- Learning is done best by observing and mimicking best practices
- So, why are we debating the value of being able to read code, good code for that matter, which can only help you to write better?

# Write Good Code by Reading Great Code



- Highly recommended book that should be a required text for all developers – especially those learning to code
- Translations of the book available in Chinese, Russian, Japanese, Greek, Polish

# Summary

- Document formats **MUST** be published
- Decline “gifts” - they can cause dependency
- Open Standards **!=** Open Source, but each helps the other thrive
- Human endeavour has always built upon the past, yet some legal regimes seem to want to stifle it – constant vigilance is the price of freedom
- Read great code to write good code – there are not two ways about it.

Questions?



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