

# Open Source Software Movement in Vietnam

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## Summary

This paper gives an analysis of the role and advantages of OSS for Vietnam, one major of those is to contribute to cut down on software piracy and try to find answer to the question: why OSS has been introduced to Vietnam relatively early (since 90s years), we not yet have noticeable success in its use. Accordingly in the last part is presented a feasible scenario for the use and development of OSS in the country, which is currently implemented.

Briefly, OSS/FS (Open Source Software / Free Software) programs are programs whose licenses give users the freedom to run the program for any purpose, to modify the program and to freely redistribute either the original or modified program (e.g., without further limitations or royalty payments).

In this paper, we try to analyse the present state of OSS in Vietnam and how Vietnam is facing up to the global growing movement on OSS/FS.

## Open Source Software and Developing countries

In most developing countries, the potential to leverage ICT for development is hindered by a number of factors, which typically include the high costs of licensing, replicating and deploying most standard software solutions. Open Source Software has been attracting a lot of attention in both developing and industrialized countries with close to thirty countries in Asia, Europe and Latin America are now encouraging their government agencies to use open source software <sup>[1]</sup> for some of the following reasons:

- **Cost Advantage:** Paying full prices for proprietary software and licensing fees is not possible in many developing countries <sup>[2]</sup>. This has created a potential niche that open source software (OSS) technologies can fill. Using OSS is the way to counter a possible threat by proprietary software holders regarding its unlicensed use. OSS such

<sup>1</sup> See – “Nations uniting for Open Source [http://dailynews.yahoo.com/h/zd/20010829/tc/nations\\_uniting\\_for\\_open\\_source\\_1.html](http://dailynews.yahoo.com/h/zd/20010829/tc/nations_uniting_for_open_source_1.html)

<sup>2</sup> For instance, the Windows operating system costs around US\$100 and the Windows Office Suite applications may cost as much as US\$800 in Kenya, this in a continent where the average annual per capita income is less than US\$250. See <http://www.wired.com/news/technology/0,1282,38749,00.html>. In Vietnam, the cost of Microsoft XP and Office is the equivalent of 1 Year 3 months of the per capita GDP. See Free/Libre Open Source software as official development aid by Jordi Carrasco-Muñoz, EC Delegation to Vietnam. See [http://www.i-today.com.vn/pls/itoday/cate\\$.htmoidung\(2004,39224\)](http://www.i-today.com.vn/pls/itoday/cate$.htmoidung(2004,39224)). This typically creates a market for illegal software. Historically, most countries have worked to protect intellectual property rights only at such time as when their own industries have become developed. But open source provides a way to respect intellectual property at a relatively affordable cost. See Correa 1996 “The UN University Discussion Paper series #2002-4. <http://www.intech.unu.edu/publications/discussion-papers/2002-4.pdf>

as Linux is the alternative and can be used effectively on a wide range of hardware platforms. This creates a further cost advantage for developing countries.

- **Robustness, Reliability and Security:** The open source development model tends to result in the development of software that is more robust, reliable and secure than proprietary software.
- **Bridging the Digital Divide within a Short Time Frame at a Low Cost:** The need in bridging the digital divide and extending connectivity and access at the lowest possible cost and within the shortest possible time frame without sacrificing quality also favours the use of open source. Many recent initiatives have focused on the education sector and have used Linux [3]. In such major undertakings, many developing countries have articulated the need to have choice and not be tied to a dominant producer. This has also been an important consideration favouring open source software.
- **Potential for Development of Locally Relevant Software:** Commercially packaged software is not typically adapted or customized for local conditions, except in the case of larger and more profitable emerging markets. Open source offers developers in developing countries the opportunity to develop applications suited to national and local needs that big corporations by themselves may not have an interest in undertaking.

Open source software thus represents an important avenue for governments, industry and individuals to put in place licensed but affordable and appropriate solutions within the realm of ICT for development.

Information and communication technologies are critical to Vietnam's modernization and development efforts. Hence it is of vital importance for Vietnam to develop reliable and quick IT applications in all fields and in the whole country. Open Source Software appears to be a good way to assist in this difficult task. In developing countries like Vietnam, where the relatively small local markets do not provide an incentive to "localise" software, development in the local language appears to be a problem with most international software products. This is favourable for the development of Open source applications, since it has a much more flexible development model.

Further, as considerable amounts of money spent on licenses can be saved with the use of open source software, it decreases the dependency on international software vendors and this prevention of "lock-in" or dependence on a few vendors is a major motivation. Finally there is evidence that OS provides higher degree of IT security. As Viet Nam prepares to enter the World Trade Organization and fully implement the Bilateral Trade Agreement with the United States, it is crucial in helping to cut down on software piracy.

### **Open Source Software movement in Vietnam**

Open Source Software/Free Software (OSS/FS), and in particular Linux, appeared in Vietnam in the early 1990's. At this time, different versions of Linux entered Vietnam.

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<sup>3</sup> For Mexico see <http://www.wired.com/news/technology/0,1282,16107,00.html>. For Denmark see "Toutes les écoles danoises passent à GNU/Linux, LinuxFrench.net, Le WebMagazine du Libre, 12 Janvier 2003.

Vietnamese OSS/FS pioneers established research groups in several cities and provinces, as well as in numerous research and educational institutions.

From mid-90s, several Linux experts contributed directly to the formulation and implementation of the National Program in Information Technology, thanks to which accelerated the penetration of OSS in Vietnam. The establishment and operations of the National Steering Committee on IT (NSCIT) had enabled a wider scope of operations of the mentioned experts to other agencies and local levels. In 1996, the NSCIT organised a series of seminars on network management and data security, in which the use of Linux-based open source software was also introduced. On 27-28 January 1996, NSCIT organised in Hochiminh City a seminar on “open source system and network OS in Vietnam”. Two subcommittees on Standards and Network of NSCIT made presentations on the connectivity compatibility and the IT standardisation, which also mentioned the possibility to “open” systems and computer networks on the basis of open source software. In 1999, NSCIT organised another seminar on the orientations in the formation and development of the software industries in Vietnam that paved the way for the formulation of Government Resolution No. 07/2000 in which the development of OSS is also mentioned.

In February 2000, the Vietnam Electronic and Informatics Company (VEIC) worked with LinuxVN Group of Hanoi National University in the Vietnam Linux OS project (OSLV project) with the following objectives: <sup>[4]</sup>

- Development of Vietnamese Linux operating system, complete with applications integrated and developed locally.
- Formation of a large contingent of software experts capable of developing and providing supports to this OS.
- Creation of favourable conditions for the development of Vietnam’s software industry with focus on developing Linux based applications for Vietnamese.

The IT Technical and Economic Program further supported the process of project implementation. The Vietnamese version of Linux came out from this project on July 2002.

At the same time, CMC Company, a well-known Hanoi software developer and hardware assembler, invested in their own Vietnamese Linux on the basis of the open source OS Red Hat and a demo version was presented in December 2000 during the 1<sup>st</sup> Conference on Linux and Open source software in Vietnam, held in Hanoi. Since 2001, there have been several Vietnamese versions of Linux and Open Office developed and released by CMC with open source licence.

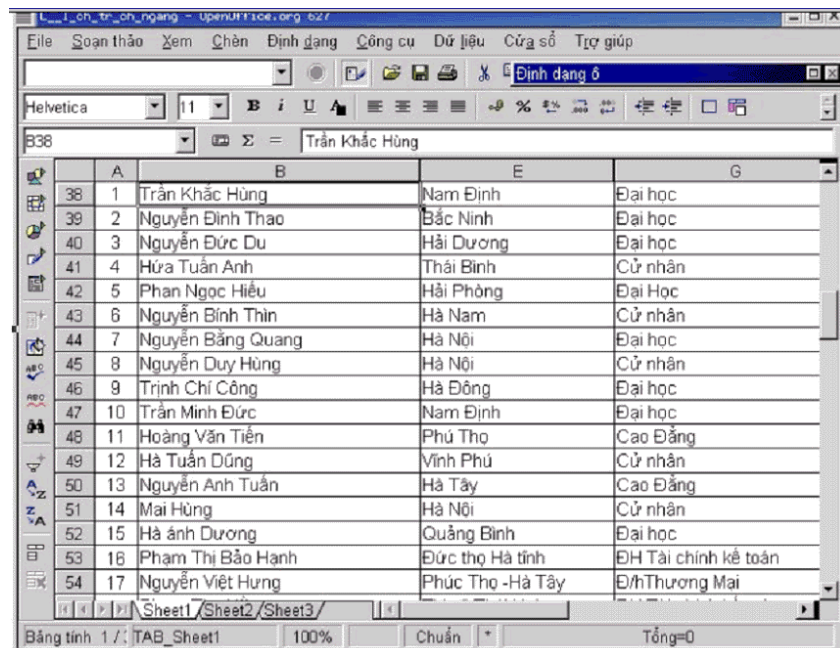
Until end of 2002, several organisations, state and private, implemented Linux and Open Source applications on their networks, the most important of which are Institut Francophonie d’Informatique, Hanoi and Ho Chi Minh City National Universities, Hanoi and Ho Chi Minh Technical Universities, Centre of Science and Technology Information and Documentation in Hanoi and Ho Chi Minh City and private companies CMC, Tinh Van, Vietkey, etc.

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<sup>4</sup> Vietnam Electronic and Informatics Corporation, OSLV project, 2/2000.



Localized Vietnamese Word Processor on Open Office (from CMC)



Localized Vietnamese Spreadsheet in Open Office (from CMC)

In mid-2002, the Steering Committee of the Program for Computerization of State Administration has decided to use OSS in all state offices, central and provincial.

The main results of the development of OSS/FW in Vietnam were presented and analysed at Vietnam's 1<sup>st</sup> and 2<sup>nd</sup> Conference on the subject entitled "Linux and OSS in Vietnam" in December 7-8, 2000 and December 17-18, 2002. A Framework of Action Plan for Deploying Applications and Development of Open Source Software in Vietnam until 2005 was presented and discussed at the 2<sup>nd</sup> Conference. This Conference gave an overview on the

activities in Vietnam and the overseas Vietnamese community that are interested in Linux and to present the state of Linux research and training in IT departments, training centres and IT units in state bodies and enterprises. A number of presentations touched upon the different forms of Linux that are in use and being developed in Vietnam, analysed local market aspects such as supplying hardware and software services, human resource training, ...

The attendees collectively expressed the hope that an appropriate policy would receive high priority in order to create favourable conditions for the promotion of OSS/FS usage. Most of the attendees recognised that it is a favourable time for Linux and Open Source Software to reach an adequate position in Vietnam's information age.

Since the 2<sup>nd</sup> conference, MOST has concentrated at realising the Conference's recommendations which in brief were to fully work-out Linux localisation and a commonly used Open Source Office Software <sup>[5]</sup>, to promote the development OSS for network services <sup>[6]</sup> and to strengthen the training of OSS developers, users and service providers <sup>[7]</sup>.

### **Challenges and Opportunities**

Developing country governments have only recently become aware of the benefits of the open source model, but awareness is only one of the issues that need to be addressed. Others include a policy framework supportive of open source, training and capacity development as well as the development of solutions using open source.

In Vietnam itself, the challenges typically pointed to include a strong dependence on international software vendors and suppliers; no legal framework; inadequate numbers of OSS specialists; a lack of widespread awareness and knowledge of Open Source Principles and a relative lack of specialised OSS services.

Just how far the open source model can go is uncertain, but what is certain is that open source software is emerging as a politically acceptable technological path for many developing countries, such as Vietnam.

Vietnam has the opportunity to learn from the experiences of both industrialized and developing countries that have tried to leverage this option. In Asia itself, countries open to the use of open source software within government and society more generally include ASEAN countries, Japan, China, Taiwan, and Korea.

### **An OSS Policy for Vietnam**

As above defined, the motivations for an adequate OSS policy for Vietnam are:

- A guarantee for the full interests of IT users.
- A motivating force for IT development.
- OSS and Standards - a door to penetrate and to integrate in IT World.

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<sup>5</sup> For this purpose, firstly a revision of the standard codage of Vietnamese characters for information exchange on computers in the light of Unicode is needed. This recommendation has been approved by MOSTE and the new standard conforming with Unicode was enforced by a governmental decision on September 24, 2001. All central and local government offices must complete its implementation before January 1, 2003.

<sup>6</sup> In particular Internet services, as well as OSS products for specialized applications, especially in the computerization of public administration.

<sup>7</sup> Furthermore to intensify R&D, to share technical and legal information and to disseminate knowledge and experience on OSS.

- Decreasing the dependence on international software vendors. Evidently, OSS isn't a magic fairy queen who can turn all our dreams into reality; we surely need to continue maintaining good relations with proprietary vendors.
- Increasing IT security and IT sovereignty.
- Helping cut down on software piracy. It is crucial for us as mentioned above.

There exist two lines of OSS policy in the world:

1. *Extreme line*: to impose by law the use of OSS in public administration. Such a point of view can be found, by example in Peru.
2. *Moderate line*: to impose only the use of open standards and recommend the use of open source software. This is a point of view of the majority of countries.

In support of the second point of view, the Committee on Open Source, newly established by the Ministry of Science and Technology on January 2003, proposed the following 10-point Policy for Using OSS in Vietnam:

1. To affirm the role and the benefits of OSS in IT development and in particular in software development of our country.
2. To strengthen the training on OSS in all aspects.
3. To recommend strongly the use of OSS applications where possible, especially good tested applications and those highly dependent on proprietary vendors. Firstly encourage and support the OSS implementation in state bodies under the State Administration Computerisation Project.
4. To promulgate different projects on the use of OSS in public and government services.
5. To settle systematically the OSS localization.
6. To study and to test a business model for OSS, which could then be replicated and become one of the backbones for IT development in the country.
7. To offer localized OSS to many kinds of users as a convenient, useful and safe product with all the necessary support services.
8. To supply national solutions to the home market, based on localized OSS, and at the same time promote the international and regional cooperation on OSS between developing countries. To give special attention and support to OSS specialized support services at national, regional and international levels.
9. To create favourable conditions for younger IT specialists from the offices of both governmental establishments and business enterprises so as to help them assimilate and dominate OSS movement to progress to the mastership of OSS.
10. To create a Vietnam Open Source Software Association (VOSSA).

### **An OSS Action Plan.**

The following is the framework of a an OSS Action Plan recommended by the Open Source Committee to MOST and other government offices in order to take the necessary measures for its implementation.

1. Overall goals of the Action Plan:

- a. Disseminate the OSS spirit and principle.
- b. Re-training and training on OSS.
- c. Promote OSS localization
- d. Promote the establishment of OSS support services.
- e. Recommend the use of OSS where it can be used and in particular in public administration.
- f. Prepare for the country's entry into the World Trade Organization and to implement the BTA with the United States and, in particular, in software intellectual property.

2. The proposed strategy is to implement the Plan in stages: The 3 recommended stages are as follows:

- a. Preparation stage
- b. Testing stage
- c. Implementation stage

Each stage will include some sub-stages. Follows is the short introduction to the content of each stage:

**(1) Preparation Stage: until end of March 2003**

- Complete a full worked-out feasibility study, include background for the use of OSS in Vietnam, particularly in state, public services and enterprises, feasibility conditions, factors for success, obstacles and how to overcome them, etc.
- Perfect the draft of an Action Plan for Deploying Applications and Development of Open Source Software in Vietnam until 2005 and submit it to Government approval. At the same time, complete the detailed schedule for implementing the Action Plan.
- Continue to promote idea of OSS and to develop OS tools and common-use applications.

**(2) Testing stage: from April 2003 to mid-2004**

Activities in this stage will focus on:

- Training of users
- Training of professionals and developers
- Promote Open Source solutions for selected branches. Those branches will be defined in the process of completing an Action Plan, with emphasising on education, state administration and public services. The OS businesses are encouraged and supported.
- Implementation test in selected branches and bodies. Test evaluation. Conclusion and recommendations for next step. In this period, we will have a closed connection between the Action Plan, the State administration computerisation project and the Program of computer equipment for general schools since both are presently the biggest Open Source users in Vietnam. At local level, Ho Chi Minh City is the first city to implement the use of OSS: it is encouraged to use Linux in all city universities

and high schools, research institutes and to use open source applications (such as Open Office, etc.) on current proprietary environment in all offices of local government, enterprises, ...

- Continue to develop OS tools and different kinds of applications.
- Promote R&D

### **(3) Implementation stage: since mid-2004**

The wide implementation of OSS use will focus on:

- State administration management (e-government)
- E-commerce
- Education
- Research

In this stage, all socio-economic sectors, include private, are encouraged to use OSS.

### **Conclusion**

It should be made clear that we come to use open source software not for the sake of policy “Against Proprietary Software” (PS), because the opposition is itself a passive action. But we must consider the reaction of PS producers and distributors and of their local support force. Their reaction can be at different levels: from price policy to the propaganda tactics causing misunderstanding, exciting doubts, anxiety in the OSS user community and government officials. The stability, the sustained knowledge, the capacity to make use of world knowledge source, ... of the responsible people for the use of OSS will be a reliable support to stand up to these attacks.

Our ultimate objective is to find the most appropriate and lowest cost solution for the application of information technology in the country. The solution should embrace also the exchange and interactions among sources of information in the society and in the linkages with the world outside. So we warmly welcome this Asian Open Source Software Conference and believe it will be successful.