#### **Perspectives On The Free Software Market**

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#### Perspectives On The Free Software Market

Can be parsed three ways....



#### Perspectives On The Free Software Market

- Perspectives on the Free (Software Market) – Free vs Controlled Market
- Perspectives on the (Free Software) Market
- (Perspectives on the Free Software Market)



#### Perspectives On The Free (Software Market)

- How has the software market changed since the early days of computing?
- How does software freedom affect the software market of today?

 Does software freedom allow the software market to grow?

- Does software freedom disrupt the software market?
- Is closed-source software doomed?



# The early days of computing

- Few computers
- Very expensive
- Physically large
- Virtually small
- Virtually slow
- Different Architectures
- OS (if any) tuned to machine
- OS (if any) tuned to job mix





# The early days of computing (Cont.)

- No "shrink wrap" market
- Most code distributed in source form
- Contract licenses
  - No software patents
  - No software copyright
- User groups exchanged code
  - DECUS
  - SHARE



# The early days of computing (Cont.)

- Highly educated and trained users
- Hardware and Software very expensive
  - 100K USD for a copy of a compiler
  - Software often given away to allow users to run computer



### **Rise of Software As Product**

- Computer Stores
  - 1977 Apple II
  - 1981 IBM PC
- Binary-only "Shrink-wrapped" software
- 1980 Copyright applied to software
- 1981-1990 Software Patents appeared
- End User License Agreement (EULA)
- "printing money" on floppy disks



### Formalization of Free Software Movement

- 1969 Unix in Bell Labortories
  - Licensed in source to universities
  - Developed by "large" community of source licensees
- 1983 SunOS V1.0 Binary only
- 1984 Gnu is Not Unix (GNU)

Richard Stallman

- 1985 Free Software Foundation
- 1992-1994 AT&T vs BSDi lawsuit



#### Formalization of Free Software Movement

- 1991 Linux Kernel project started
- 1992 386BSD => NetBSD/FreeBSD
- 1993 First distributions based on Linux Kernel
- 1994 V1.0 of Linux Kernel
- 1995 64-bit version of Linux kernel



#### **Modern Software Market**

- 1.x Billion desktop computers
  - "Inexpensive" hardware
  - "Inexpensive" software
- Software "piracy" rampant
- Not english speaking
- Not western centric
- Support moved further away
- Companies need to meet diverse needs



#### **Free Software in Market**

- Reduces up-front cost of software
- Allows "sweat equity" in development
- Gives control to end user
  - Language
  - Business practices
  - Timely bug fixes
  - Longevity of solution
  - Security



# In The Clouds

- Proprietary vendors hiding in clouds
  - Even less control by end users
  - Even less security
- Free software used in clouds can give flexibility
  - Run on desktop systems
  - Run on local server
  - Run on regional server
  - Run on international server



Summary

Software started as "Free Software", and moved briefly to "Proprietary, Closed Source Software".

To meet modern needs world wide, software development has to return to "Free Software".



# Perspectives on the (Free Software) Market

- How do end users benefit from Free Software?
- Why do people write Free Software
- Importance for a nation to develop software sustainability
- Why do people in emerging economies have a different view on software?



#### How Do End Users Benefit From Free Software?

- Freedom to read the source code
- Freedom to change the source code
  - Bug fixes
  - Needed functionality
- Freedom to distribute those changes to those who need them
- Freedom to use the software for any purpose



# Why Do People Write Free Software?

- Why do Amateur Painters Paint?
- They need it for themselves
  - Maybe others will help
  - Selling software is hard
- They are paid to do other things

- Software is a tool

 They are developing it in their own economic structure



### Importantance For A Nation To Develop Software Sustainability

- Develop technical abilities in their own economic marketplace
  - May not afford "first world" rates
  - Build marketplace for IT workers
  - Reduce "brain drain"
- Obsolescence protection
  - Software
  - Hardware
- Embargo/Security



### Why Do People In Emerging Economies Have A Different View of Software?

- Philosophies on "ownership" are different
  - Non-destructive copy
- Cost of commercial software prohibitive
  - Hardware no longer most expensive part
- National pride



#### Summary

#### Free Software is



#### (Perspectives on the Free Software Market)

- How does the marketing of Free Software differ from proprietary software?
- Why might Free Software have a harder time in the marketplace than proprietary software?
- What is coming that might make Free Software even harder to market?



### Marketing of Proprietary vs Free Software

- Proprietary
- Per-unit charge
- Product based
- Protected IP Hard to duplicate, easy to re-sell
- Producer is in control

- Free Software
- Typically Free
- Service based
- Free IP Easy to duplicate, hard to re-sell
- Consumer is in control



# What Types of Services?

- Installation
- Integration
- Training

All of the above you can also do with proprietary software

- Bug fixing
- Software extention/integration
  These two you can do *better* with Free Software



#### Marketing of Free Software Harder than Proprietary Software

- Proprietary software charges you for its marketing
- Proprietary software makes you watch its advertisements
- Proprietary software allows the vendor to charge you over and over again
- Proprietary software tells you when to upgrade both software and hardware



#### What Will Make Marketing Free Software Even Harder?

# **Cloud Computing**



# **Cloud Computing**

- Will hide software source code from user
- Will allow cloud vendor to lock in customer



#### **How To React?**

 Create your own "cloud" using Free Software

> Run your software where and when you decide

> Use cloud computing facitities with Free Software to gain capacity

 Virtualize your desktop, local server and remote server



#### **The Golden Rules**

- It is very hard to sell Free Software
- You may try to sell services on Free Software
- You should be selling *solutions* based on Free Software

– This is what IBM is doing.....



#### Summary

Customers do not want software. Customers want solutions to their problems. Free Software facilitiates those solutions.

