The State of the Linux Desktop
An OSDL Perspective

John Cherry
OSDL Desktop Linux (DTL)
September 23, 2006
The State of the Linux Desktop

Riding the Open Software Wave

The Linux Desktop Markets
Linux Desktop Market Data
The Linux Desktop and KDE
Riding the Open Source Wave
The OSS Wave

Hardware - 25%
Operating System - 25%
Middleware - 25%
Applications - 25%
Margins - 10%

Additional IT spending:
Applications - 50%
Middleware - 30%
Operating System - 10%
Hardware - 10%
Margins - 10%

Buzz words:
Commodity
Value line
New Co-Dependent Relationships

Corporations / Communities

- Corporations are cooperating with each other
- Corporations are working in the development communities.
- Corporations are creating communities
- Communities are becoming more customer focused

For the first time in history, customers and developers are in control!
The Business Model Works!

Shared risk, shared reward

FOSS becoming a standard part of infrastructure, disrupting entire markets
Not IF, But WHEN

- No turning back
- New co-dependent relationships
- More commodity
- The value line is moving
- Linux has gone mainstream
- There will be winners...and losers.

Can't stop the wave!
The State of the Linux Desktop

Riding the Open Software Wave

The Linux Desktop Markets

Linux Desktop Market Data

The Linux Desktop and KDE
Desktop Linux
Desktop Markets

- Fixed Function
  - ATM
  - Airline Boarding
  - Pass Kiosk
  - POS
  - Vending Machine
- Technical Workstation
  - EDA, CAD/CAM
  - Movie/video production
  - Animation
  - Software Development
- Transaction Workstation
  - Banking
  - Call Centers
  - Finance/Trading
  - Front Office
  - Gov't Forms
  - Travel Agents
- Basic Office
  - Document Review
  - Office Productivity
  - Email and Messaging
- Advanced Office
  - Power users of MS Office
  - Multiple Applications
  - Custom (in-house) Applications
  - Production Applications
- SOHO
- Consumer
  - Education
  - Gaming
  - Multimedia

Thousands of Applications
The State of the Linux Desktop?

- Growing in ALL markets
- Hottest in markets with low application thresholds
- Somewhere between 1% and 6% of the consumer desktop market
- Several HOT desktop products have just hit the market
- Forecast: Consistent, steady growth, until ...
The State of the Linux Desktop

Riding the Open Software Wave
The Linux Desktop Markets
Linux Desktop Market Data
The Linux Desktop and KDE
Unreliable Market Data

- Freely downloadable and distributable content.
- Market data is expensive
- Poor survey tools for some geographies
- Market biases and enterprise focus
Market Research

Hype Cycle for Linux, 2006
Gartner Research, 19 June 2006

Why Linux Isn't used More Widely on the Desktop
Gartner Research, 3 March 2006

Desktop Linux Awareness, Usage, and Adoption
Internal OSDL member research, January 2006

Desktop Linux Client Survey
OSDL DTL Survey, December 2005

Desktop Linux Technology & Market Overview
Open Source Applications Foundation, 10 July 2003
Hype Cycle for Linux, 2006

Hype Cycle

Technology trigger
Inflated expectations
Trough of disillusionment
Slope of enlightenment
Plateau of productivity
Desktop Users

Data-entry workers
Climbing the slope of enlightenment

Consumers in mature markets
On the rise

Consumers in emerging markets
On the rise
Interesting Conclusions

“Virtually no technology is out of bounds for Linux.”

“For Linux to become popular, it needs to move more toward OS-agnostic applications.”

“Commoditization/standardization/modularization”

“Linux should be viewed as an enabling technology for new sets of business solutions.”

“Lack of compatibility with iPod and iTunes is an obstacle to providing the complete consumer experience.”

“Piracy of Windows is also a major barrier to adoption.”
Why Linux Isn't Used More Widely on the Desktop – 2006 data

• Compatibility between Linux distributions
• Compatibility between Linux and Windows applications
• Dueling desktop graphical user environments

All are application issues that ISVs face today!
Distro Compatibility

Same kernels

Differences

- file formats
- file locations
- runtime libraries
- packaging
- fonts and text layout
Application Compatibility

Users stick with applications they like!

Approaches:

- Linux-system alternatives
- Translation Layers
- Virtual machine emulation

*Vendors port Windows applications to Linux*
Dueling Desktops

Choice, a good thing!

Competition: innovation areas

Cooperation: enabling applications

KDE applications should run on GNOME
GNOME applications should run on KDE
ISVs should not have to port their application(s) to several desktop environments

Do you feel the love?
freedesktop.org
Next Study - Awareness/Usage

### Linux Awareness

<table>
<thead>
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<th>Country</th>
<th>Business</th>
<th>Consumer</th>
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<tbody>
<tr>
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<td>94%</td>
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<tr>
<td>China</td>
<td>93%</td>
<td>29%</td>
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Consumer awareness low in Germany

India and China
- Government direction
- Perceptions of Linux
## Linux Usage

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<tr>
<th>Country</th>
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<tr>
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6% of 85% = 5.1%

2% of 29% = 0.58%
Opportunities (Awareness)

Low awareness

High usage

Low awareness (business)
- India - 48%
- Russia – 67%
- S Africa – 69%
- Mexico – 72%

High Usage
- US - 25%
- Russia – 14%
- Germany – 12%
- Spain – 11%

Is Russia the best opportunity?
# Reasons to Use Linux

## Reasons for Using Linux - Business

<table>
<thead>
<tr>
<th>Region</th>
<th>Stability</th>
<th>Low Cost</th>
<th>Security</th>
<th>Code Modification</th>
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Economic? Political? Cultural?
Cost/stability in emerging markets
Security/code mods in mature markets
## Linux Satisfaction

### Linux Satisfaction - Business

<table>
<thead>
<tr>
<th>Country</th>
<th>Abundance of Features</th>
<th>Robustness of Features</th>
<th>Stability</th>
<th>Security</th>
<th>Ease of Use</th>
<th>Ease of Admin</th>
<th>Fixes/Patches/Updates</th>
<th>HW/SW Upgrading</th>
<th>TCO</th>
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**Abundance of features – 80%**
**Robustness of features – 86%**
**Stability – 88%**
**Security – 89%**
**Ease of use – 69%**
**Ease of administration – 73%**
**Fixes/patches/updates – 81%**
**HW/SW upgrading – 75%**
**TCO - 90%**
Rest of the Study

• Plans for Linux Expansion
• Source of Linux awareness
• Linux distribution awareness
• Reasons for NOT using Linux
  – Not familiar with use
  – Lack of software
  – Lack of hardware
Conclusions / Guesses

We can make the data say anything!

Familiarity is a key issue in all geographies

Reasons to use Linux/OSS have not changed (cost, stability, security, maintainability)

Application availability is still the top inhibitor to the adoption of Linux.
OSDL Survey

• Top reasons for deploying Linux
  - Employees requesting Linux (user demand)
  - Competitors successfully deploying Linux
  - TCO
  - Security
  - Source code availability (for maintenance)
  - Corporate direction
  - Unhappy with existing desktop OS
Critical Applications (in order)

- email / messaging
- office productivity
- browser
- database applications
- developer tools
- apps specific to your business
- internally developed apps
Top Inhibitors

- Application support
- Peripheral support
- End user training
Desktop Linux Technology and Market Overview, 2003

Perspective

Forecast: 10% of consumer market by 2007.

Leverage points:

- desktop interoperability
- XML-based file formats
- education of public sector decision makers
- improved organizational infrastructure
- more commercial end-user applications
- the WINE project
- absence of a standard Linux
- user friendly documentation
Other “Desktops”
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“Windows-like” or “Something New”? 

Feature compatibility with Windows will always disappoint.

The leapfrog approach

  Look and feel
  Cool capabilities
  Form factor

Basics have to “just work”

  Power management, wireless, printing, installation, plug and play, consistent fonts and text layout, fast boot, and support for the iPod generation

Must use standard building blocks
Portland Project

Common APIs to enable ISVs to more easily integrate their applications
- A uniform programming interface regardless of the user’s choice of desktop (Gnome, KDE, XFCE)
- Useful for both FOSS and commercial apps

What is coming?
- Portland 1.0 (next week)
- Distro adoption (Q4)
- LSB adoption (Q1'07) with LSB 3.2
OSDL DTL

Calendar

Oct 6-7: Text Layout Workshop in Boston, MA
Oct 23-25: Printing Summit in Lexington, KY
Dec 7-8: Desktop Architects Meeting – 3 in Portland, OR

2007 Events

ISV Events (Asia, Europe, NA)
Desktop Architects
Technical Summits
GUADEC / aKademy
Desktop conferences
Desktop Architects

ISV and developer support

Portland, Packaging, Developer portal

Cross project collaboration

freedesktop.org specs, fonts and document fidelity, Gnome/KDE

Other

sound/multimedia, open source drivers, desktop standards, Linux desktop community, international developer cooperation
Summary

Listen to application vendors

Runtime integration with desktop (Portland)
Installation for “Linux” (Portland, package formats)
Don't “lock in” applications to KDE (libs, interfaces, tools, etc.)

Use standard building blocks, interfaces/protocols, and file formats (ODF)

Applications for “Linux”!