Introducing Open Source & Open Source in India

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Atul Chitnis

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- Linux & Open Source Promoter
  - Since 1994
  - PCQuest Linux Initiative
  - Linux Bangalore (/2001, /2002, /2003, /2004,...)

Computing Issues

- Increasing computing costs
- Rapid obsolescence
- Upgrade Nightmares
- Bloatware
- Decreasing performance
- Support Problems
- Data Security
- Internet & INTRAnet.

Computing Reality

- Hardware is stable and affordable

- Often, Software is not

- Most Computing Issues are Software related.

Introducing Open Source

What is Source Code?

- Lines of instructions to computers
- Dozens or Millions of Lines of Code
- You need the Source Code to
  - Modify Features
  - Extend Functionality
- Commercial Software Companies
  - Intellectual Property
  - Prevent Modification by Customers.

Evolving Software

- A stone cannot grow
    - It erodes or decays
- A living organism can grow
    - It can adapt, improve and evolve
- The same applies to Software
    - Proprietory (closed source) software does not benefit from user involvement
    - Open Source software is improved, adapted and evolved by users.

Open Source Advantage

- "When programmers can read, redistribute, and modify the source code for a piece of software, the software evolves. Users improve it, users adapt it, users fix bugs."

Products v/s Process

- Open Source is a **<u>Process</u>**, not a product
- Software created using the Open Source process are products
  - Linux, Mozilla, OpenOffice, Gaim, KDE, Gnome, etc.

The Open Source Process

1. Initial Design
2. Initial Coding
3. Release of Source Code
4. Extensive Testing by Users
5. Bug reports by Users
6. Patches and new features from Users
7. Incorporate into main project
8. Repeat from 3

Open Source License

- Open Source Software is distributed under a license
    - Does not *restrict* freedom, but *guarantees* it
- Examples of Open Source Licenses
    - Gnu General Public License (GPL)
        - Maximum Open Source benefits
    - Library GPL (LGPL)
        - Allows linking of OSS libraries to closed apps
    - BSD License
        - Allows turning code into closed source.

Open Source Software (OSS) Advantages

OSS Advantages

- Lower initial costs
- Use of open standards
- No vendor lock-in
- Multiple support options
- Ability to audit
- Rapid response to security issues
- Enhanced stability
- More innovation.

Open Source Advantage

- "Open Source gives the user the benefit of control over the technology the user is investing in"

  -- Bob Young, Red Hat Software

OSS in a commercial world

- The Internet is built largely on OSS
  - Apache, Sendmail, Bind....
- OSS implementations perform better
  - TCP/IP, Samba, etc.
- OSS understands proprietory formats
  - Doc, PPT, XLS, etc.
- OSS applications exist on multiple platforms
  - 32 and 64 bit
  - x86, SPARC, PowerPC, 68K, MIPS, Alpha, StrongARM...

Platforms that run OSS

- Free Operating Systems
  - Linux
  - FreeBSD and OpenBSD
- Proprietory Operating Systems
  - Windows
  - Solaris
  - AIX
  - MacOS
  - etc.

Who uses OSS today?

- Industry Giants
- Banks & Financial Institutions
- Trading Houses
- Government Organizations
- NGOs
- Internet Service Providers
- Individuals.

Why favour Open Source?

- Technology that fits the budget
  - Not the other way round!
- Well supported Technology
  - Support is the biggest cost factor!
- Build on available capabilities!
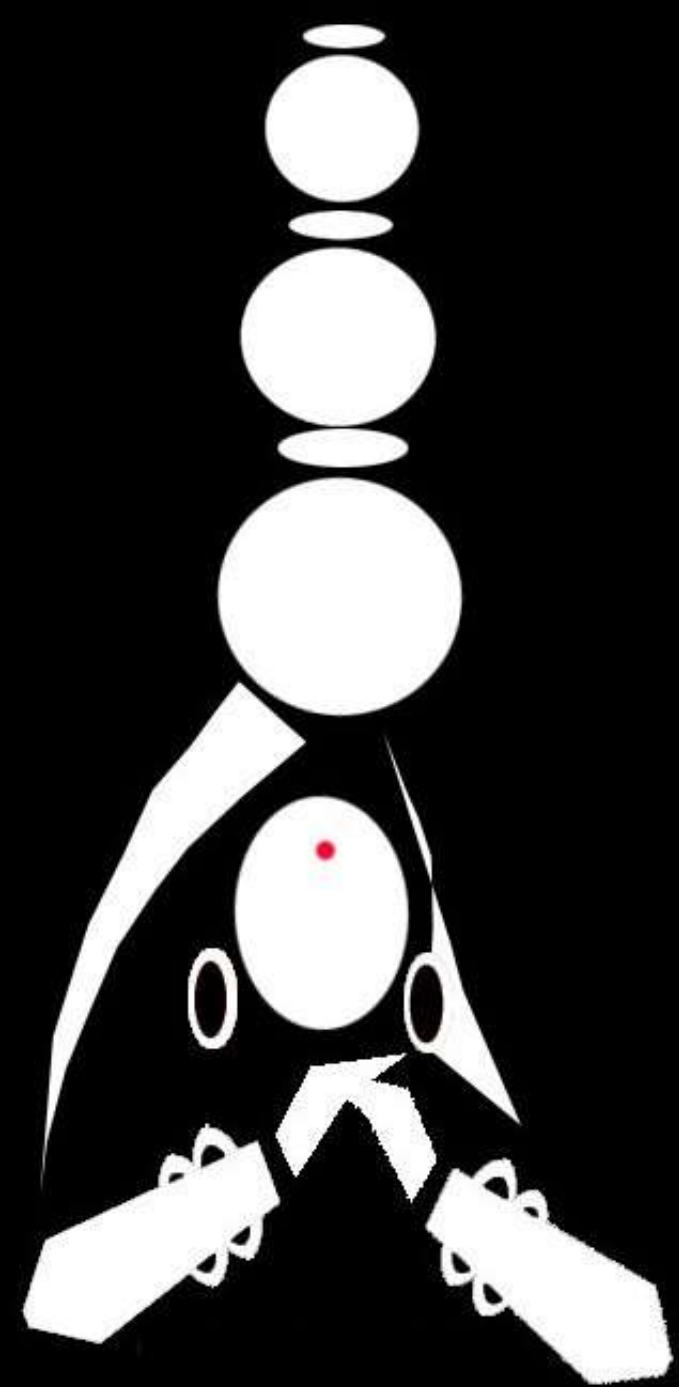 - Unix/Linux are part of every technical curriculum.

Being a part of it

- Supporting OSS
  - By using products created using the Open Source process, you are supporting it

- Becoming a part of it
  - By supporting the Open Source process, you become a part of it.

Linux in India

The Indian Scenario

- High cost of equipment
- Longevity of equipment
- Distance from support
- Languages and scripts.

Linux in India

- First appeared in 1992

- Mostly experimental till 1995

- 1996 -Individual to Institutional

- 1998 -Corporate Adoption

- 1999 -Explosive Growth

- 2000 -Mainstream!

- 2002 -Enterprise Acceptance

- 2004 -Linux Everywhere

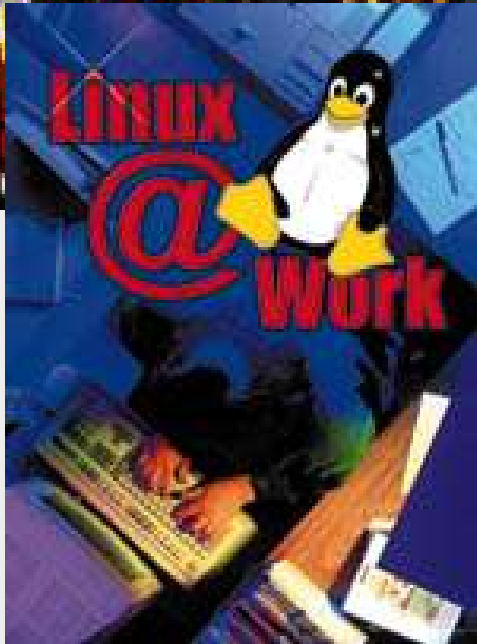# Computer Publications

- PC Quest, CHIP, Linux For You

- Play a major role in Linux Growth

- Articles
    - Informative
    - How-To

- Free CD-ROMs

- Cooperative, not competitive.

The PC Quest Linux Initiative

- Started in March 1996

- Distributed almost ONE MILLION free Linux CD-ROMs

- Ongoing project

- Steady supply of software

- Articles every month

- www.pcquest.com/linux.

Community: Linux User groups

- LUGs in many cities
  - Even companies!
- Thousands of members
- Growing at an astounding rate
- Regular meetings
- Mailing Lists
- In Bangalore
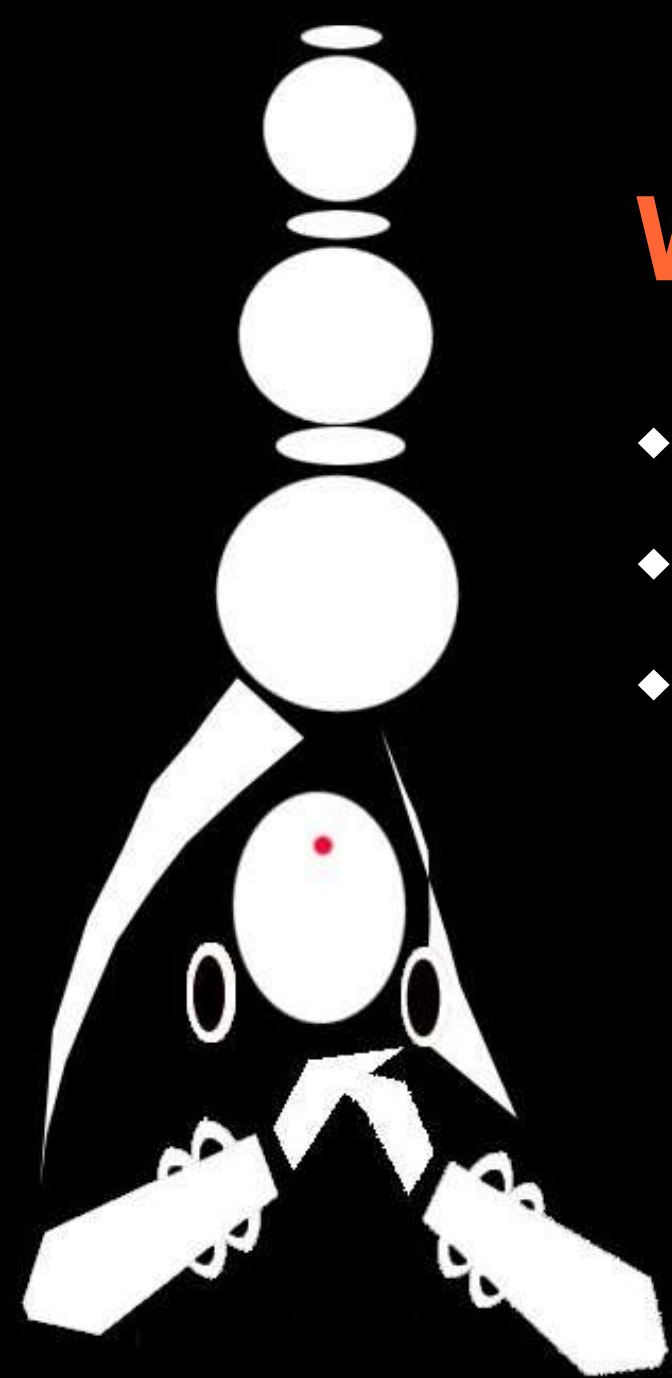 - http://linux-bangalore.org/blug

Community: Localization

- Translation into Indian Languages

- Many already done
  - Hindi
  - Bengali
  - Tamil
  - Kannada
  - Malayalam
- http://www.indlinux.org

What Linux is to India

- Technology Enabler

- Sustainable Technology

- Computing for the masses.

The Simputer

- Stand-alone computing device

- Runs Linux

- "Socially Relevant Device"

- Targets the Digital Divide

Linux Bangalore

- **India's Largest Open Source Convention**
- **3000+ Participants**
  - **From India, USA, Europe and elsewhere**
- **Community Driven Event**
- **The Audience**
  - **Open Source Developers**
  - **Businesses deploying/developing OSS**
- **Details at**
  - **http://linux-bangalore.org**

Thank You!

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