

RED HAT :: SAN DIEGO :: 2007

**SUMMIT**



**RHEL5/Fedora 7 Live CD experience**

**David Zeuthen**

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# Welcome to San Diego!



# Live CD

- OS Development



# Live CD

- OS Development
- Software Commons



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- Software Commons
- Appliances



# Live CD

- OS Development
- Software Commons
- Appliances
- Community around Live CD tools



# About me

- OLPC
  - Wrote the build system



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- Involved in GNOME / freedesktop.org
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  - fd.o HAL maintainer
- Red Hat Desktop Team



# History

- Did some work on the OLPC build system



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- Fedora 6 Live CD



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- Fedora 6 Live CD
- Rewrite in Python
- Fedora 7 and beyond



# Design Goals

- Feature parity
  - SELinux, Read/Write root file system



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- Feature parity
  - SELinux, Read/Write root file system
- Installable
- Easy to use
  - # livecd-creator --help



# Design Goals

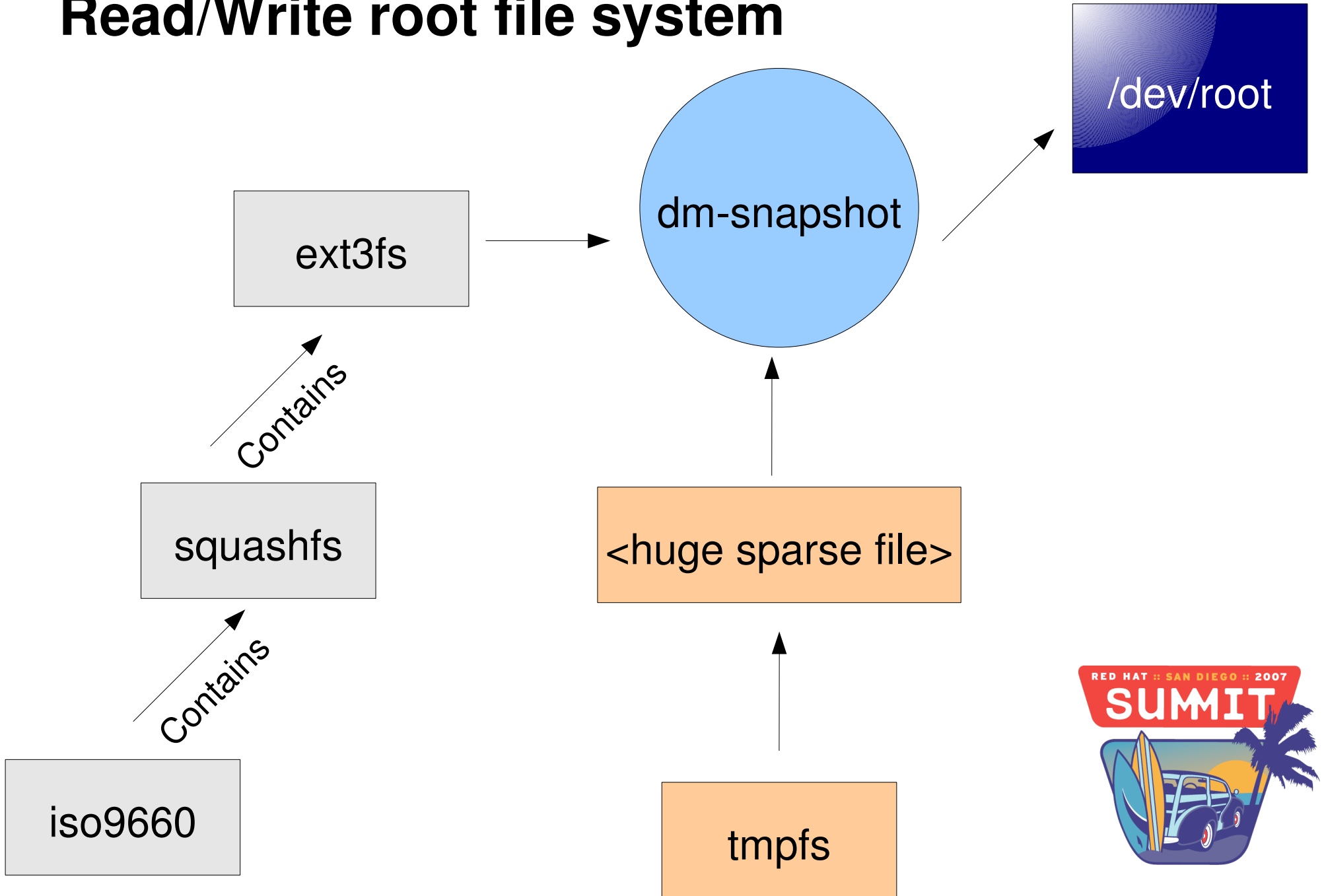
- Feature parity
  - SELinux, Read/Write root file system
- Installable
- Easy to use
  - `# livecd-creator --help`
- Hackable
  - Mature code base, Extensible
  - Free Software / Community



# Demo!



# Read/Write root file system



# Easy to use

- `# livecd-creator --config=/usr/share/livecd-tools/livecd-fedora-minimal.ks --shell`
- Demo!



# Build Process

Setup ext3  
loopback



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Install  
Packages



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Post-Install  
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Create  
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Create  
ISO9660fs



# Installable

- ext3fs is pristine
  - All Live CD specific changes at boot time
    - Hardware auto-configuration
    - Add Live CD user
    - Automatic login



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- ext3fs is pristine
  - All Live CD specific changes at boot time
    - Hardware auto-configuration
    - Add Live CD user
    - Automatic login
- Installation:
  - `# dd if=/dev/live_ext3fs of=/dev/sda1`
  - Extremely fast (no seeking)





# Applications

- Derived distributions
  - Fedora SIG's: Eclipse, Games, Music, ...
  - Enthusiasts, LUG's, OLPC



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- Testing / QA
  - Much easier than installing the OS...



# Applications

- Derived distributions
  - Fedora SIG's: Eclipse, Games, Music, ...
  - Enthusiasts, LUG's, OLPC
- Appliances
- Testing / QA
  - Much easier than installing the OS...
- Streamline OS development
  - Hardware auto-configuration
  - Limited LiveCD space: fight bloat, deps





# Future features

- Persistence
  - Keep your changes on a USB thumbdrive



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- Optimized boot / read ahead
  - Applies to live installs too!



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- Persistence
  - Keep your changes on a USB thumbdrive
- Optimized boot / read ahead
  - Applies to live installs too!
- Single well-defined KS file defines content
  - Live CD
  - Xen Image
  - Installation media
  - ...



# Future features (cont'd)

- Boot Live CD image from network
  - PXE or maybe even mDNS
  - Share Live CD image over network...



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- Better UI integration
  - Installer
  - Persistence management
  - Higher-level tools...



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- Boot Live CD image from network
  - PXE or maybe even mDNS
  - Share Live CD image over network...
- Better UI integration
  - Installer
  - Persistence management
  - Higher-level tools...
- More architectures
  - ppc





# Community

- Mailing list

<http://www.redhat.com/mailman/listinfo/fedora-livecd-list>

- Source code repository

<http://git.fedoraproject.org/?p=hosted/livecd;a=summary>

- Maintainers

- David Zeuthen <[davidz@redhat.com](mailto:davidz@redhat.com)>
- Jeremy Katz <[katzj@redhat.com](mailto:katzj@redhat.com)>

- Get involved!

