Haiku Distro Guidelines

A debugging

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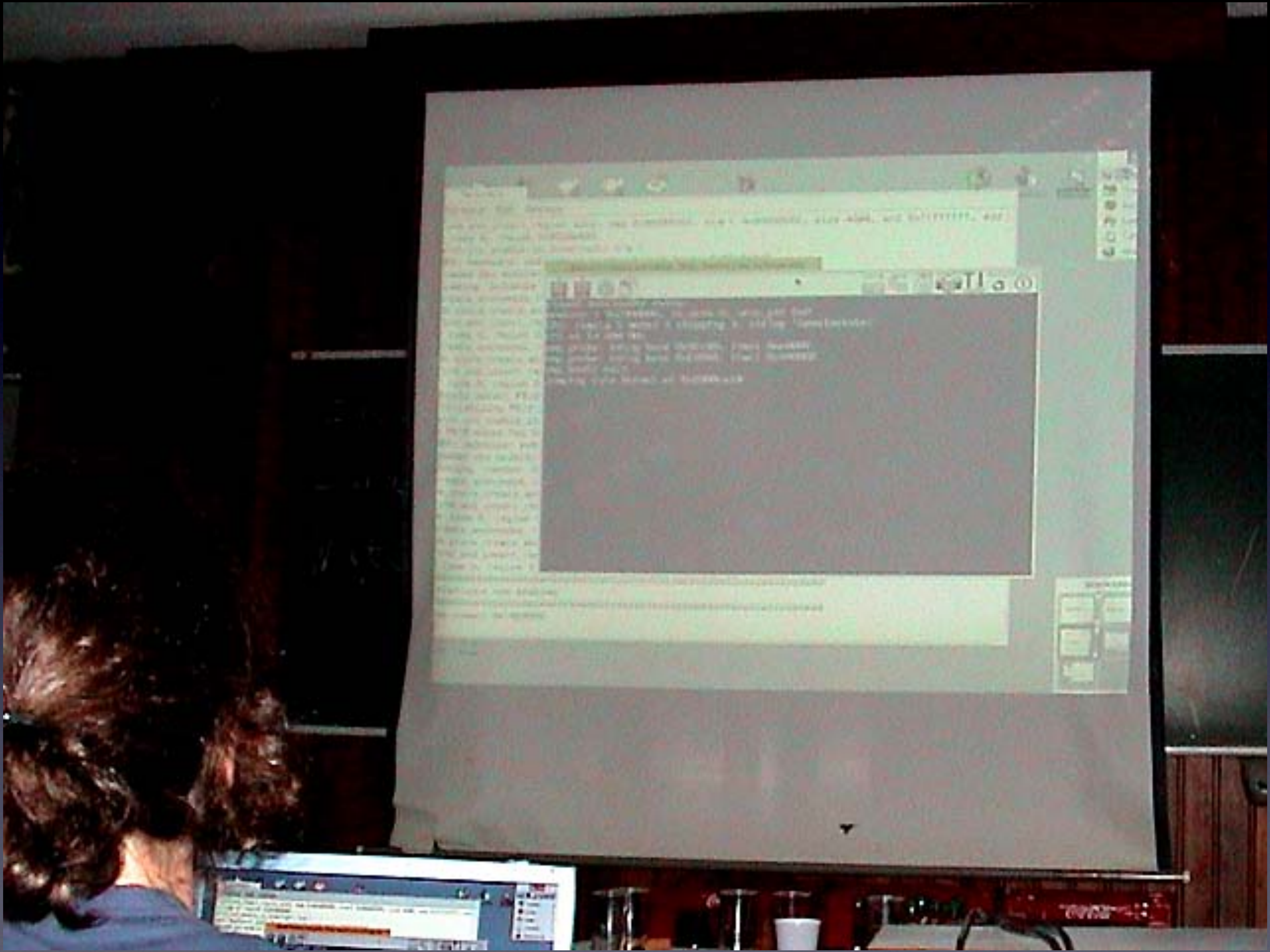
But first…

It’s been a long time in the making...



(OpenBeOS demoed at BeGeistert 010)

Congratulations on Haiku Alpha 1!

Why do the guidelines exist?

- To create a single standard OS
  - Ensures compatibility
  - Avoids “Distro hell”

So, what seems to be the problem?

The Guidelines are:

- Self contradictory
- Vague
- In some cases, might be impossible to follow
- Based on a false assumption
- Nothing is explained
- Liable to lead to a great deal of confusion
- More likely to lead to disto hell!

Self contradictory

- “*Haiku distributions must comply to the following set of guidelines*”
- The MIT license defines the rules. The guidelines are voluntary
- Fix: change “must” to “should”

- Don’t order people to follow the guidelines
    - They will ignore you!
- Encourage people to follow the guidelines

Self contradictory 2

- *“The trademark "Haiku" may not be used in your distribution's name.”*
- This is covered by trademark law
- You lose copyrights if you do not enforce them
- Fix: change “may” to “must”
- Trademark rules should be separate in the guidelines

- I’ll come back to this later...

Self contradictory 3

- *Use the "common" folder for customizations whenever possible.*
- Is “common” a good name for a folder that holds things that are not common?
- How about:
  - /custom/my_distro_name/

Vague

- *“You must not change or extend the API of the Haiku system libraries in any way”*

- Why not?
- What are the “Haiku system libraries”?
- Can I add APIs in other libraries?
- Can I add other libraries?

Vague 2

- *You should not change, move, or rename any of the files and folders that are part of the base distribution's "system" folder without good reason.*

- What is a good reason?
- What is a bad reason?
- What is the base distribution?

Impossible to follow?

- *"Use the same GCC version as the official distribution (X86 GCC 2.95.3 Hybrid with GCC 4.3.3 alternative GCC libraries)"*
- Making an ARM port compliant is a bit difficult if you have to compile for x86!
- What if you are porting to a CPU arch that does not have that version of gcc?
- What if BeOS compatibility is not a goal of your distro?

Nothing is explained

- Why do these guidelines exist?
- What is their purpose?
- Why should I follow them?
- What do I get if I do?
- What do I lose if I don’t?

The *real* problems

I’ve just been pedantic so far...

What is Distro Hell?

- Linux has lots of distros
- ...but many are incompatible

- The guidelines were written to avoid this

Why does distro Hell exist?

Distro Hell is an historical problem with Linux:

- Technically, Linux is only a kernel
- There is no user land
- When Linux started, distro makers had to define their own user land.
- They all did it their own thing
- They added complex package management
- The problem exists to this day...

The false assumption

- “Multiple Haiku distros automatically lead to distro Hell”
- Distro Hell is unique to Linux, it does not affect any other OS

Will distro Hell affect Haiku?

- Haiku is starting with a well defined user land
- Unless you need to make big changes to the system, distro Hell for Haiku should simply not exist

But here is a problem...

- Q - How do you create an ***interesting*** distro if you cannot be different?
- A - You can't. The guidelines do not allow it
- It is going to happen anyway

Haiku is part of the open source world

- A world where nobody can agree on anything
- "*Lots of communities that all hate each other*"

- Projects change and fork for the dumbest of reasons
- but in many cases this has lead to better things...

Open source likes to fork

- X.org - forked because of license dispute
- OpenSSH - started because of license dispute
- PF - started because of license dispute
- Gnome - started because of KDE license dispute
- gcc - started as an experiment
- Firefox - started as a side project

Even OSs like to Fork

OpenBSD

- A personality clash lead to the creation of the definitive secure OS

DragonFly BSD

- A technical disagreement lead to a system that is adding clustering into the kernel. Eventually all computers will become clusters

Change leads to good things

Mass confusion

- Not allowing the Haiku name to be used by distros is going to cause a ***lot*** of confusion

A tale of 2 distros

- Compliant distro “myOS” is fully compliant and compatible
- ...but does not sound like Haiku

- If you want to solve problems you have to ask on a website about an OS that sounds completely different from yours!

A tale of 2 distros 2

- Non-compliant distro “HighKoo” is non-compliant and incompatible, but does sound like Haiku
- Any advice from a Haiku website is likely to be confusing at best
- HighKoo isn’t trademarked so there’s nothing to stop someone using it.

A tale of 2 distros 3

- Remember, guidelines are voluntary
- Only one is compliant
- Both are “Haiku distros”
- The name is no help in telling you which is which

If they change name

- The non-compliant "HighKoo" becomes "AnotherOS"
- But, even if they don't directly use the name, it will still be a "Haiku distro", whether it follows the guidelines or not
- The trademark guidelines give you no way to tell what is compliant and what is not

What’s going on?

- Linux has a generic family name
- Ubuntu, RedHat, Suse are the brands

- BSD has a generic family name
- FreeBSD, OpenBSD, NetBSD are the brands

- Haiku does not have a family name to distinguish individual brands

What’s going wrong? 2

- This is the open source world

- There are many different ways of doing things
- The open source world does all of them

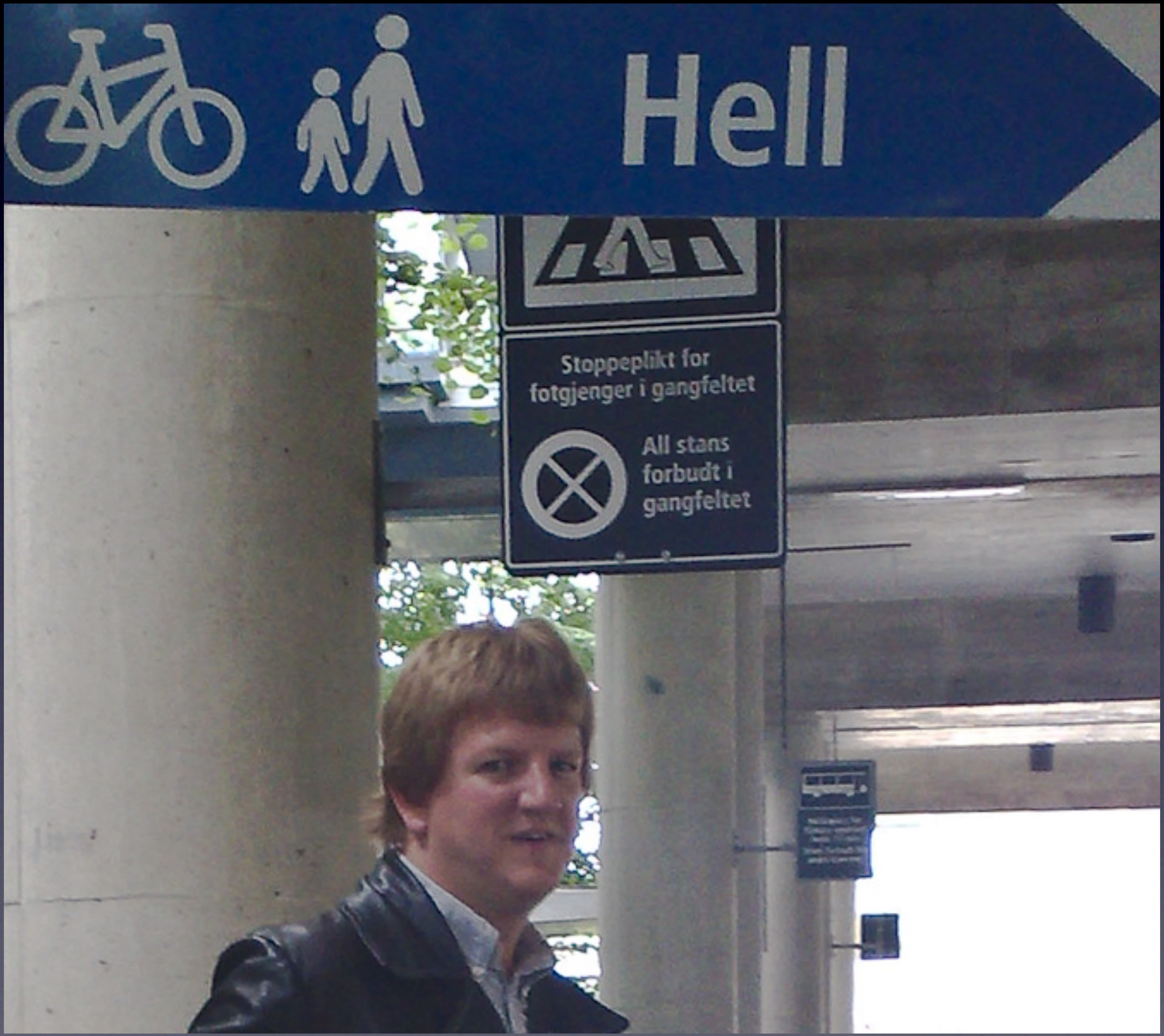
- Changes will happen
- The trademark rules as they stand will only make things worse

The ultimate problem

- The guidelines do not allow for change
- They are designed to preserve a system, but ignore anyone who changes it
- Change is going to happen if you like it or not
- If you do not allow change, you cannot control it
- If no direction is given, they will take their own

The current guidelines lead directly to distro Hell!

You don’t have to go there


Hell
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The important thing

- Lots of compatible distros is not a problem
- Lots of incompatible distros is

The important thing: Compatibility

- Source compatibility - works across all platforms, all compiler versions

- Binary - more user friendly but very limiting

Accept change

- Having a single OS is a good idea

- But, people will want to change it
- The guidelines should accept this

Accept change 2

- Define change so distros can remain compatible with Haiku and other Haiku distros

- Define what can change
- Define what should not change

Enforcing the guidelines

The Java EE model:

- Java EE defines a base system
- If you are compliant with the base system you can say you are a Java EE system
- You can add whatever you want beyond that

Enforcing the guidelines 2

- Define Haiku as a “base system”
- Define a very specific set of rules that define compatibility with the base system
- Enforce this with a test suite

- Do not define anything that might be due to personal preference (look and feel, spatial browsing etc.)
- Allow distro developers as much freedom as possible

Enforcing the guidelines 3

- The Haiku name is by far the best weapon to use in enforcing guidelines
- Define a name for the family: Haiku seems obvious
- Define a name for the base system: e.g. Base Haiku?
- Allow distros to use the family name if they can prove they are compatible with the base system
- Define a naming scheme:
- OpenHaiku, FreeHaiku, NetHaiku

Enforcing the guidelines 4

- Even with well defined guidelines there will still be some who cannot* act within them
- Even here it might be possible to contain potential damage:
  - Define the specific sub-systems within Haiku
  - If one sub-system is changed it should not affect the others

*There might be a very good reason for this

Conclusion

- Guidelines are a good thing
- They need to define:
  - Why they exist
  - Binary and source compatibility
  - The base system
  - What can change
  - What should not change
  - How to minimise unsafe changes
  - Define a family and a brand
  - Rules for the use of trademarks

The end