Dioscuri
The emulator for digital preservation

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Emulation as a preservation strategy

Our digital life...
A fatal exception 0E has occurred at 0167:BFF9DFFF. The current application will be terminated.

* Press any key to terminate the current application.
* Press CTRL+ALT+DEL again to restart your computer. You will lose any unsaved information in all applications.

Press any key to continue
Emulation

= adapt the computer environment to render the digital object authentically.

- Substitute for old hardware
- No changes to digital object
- Renders static and dynamic objects
- Create once, apply for all
- No periodic conversions
- Proven technology (gaming industry, corporate solutions, cross-platform)
Dioscuri: durable & modular emulator

Two key features: durability and modularity

- Durable -> emulator has to endure time. This can be done by making the emulator portable to a wide range of computer platforms using a Virtual Machine (VM).
What is modular emulation?

- Modular -> emulator consists of modules.
Results

- **Dioscuri** – modular emulator for digital preservation
- Current version: 0.4.0 (Beta)
- Programmed in Java using JVM
- Capable of:
  - Running MS-DOS, FreeDOS, Linux 16-bit (ELKS), MS Windows 3.0
  - Norton Commander 3.0, WordPerfect 5.1, DrawPerfect 1.1, many games like PC-versions of PacMan, Tetris, Chess and many more. Also DOS-based webbrowser Arachne.
  - XML-based module configuration
  - Text extraction from emulated environment into the clipboard of host computer.
  - Running on many platforms like Intel/Windows, PowerPC/Mac, Sun/Sparc Solaris.
Dioscuri is the computer hardware emulator for digital preservation and access. Its design maximizes durability and flexibility. Because Dioscuri is written in Java it is possible to run it on almost any computer platform now and in the future.

Due to its modular structure, each hardware component is represented as a software module. By configuring all modules the way you like it any virtual computer can be created!

Dioscuri takes its name from the Greek myth of the twins Castor and Pollux: one of them is mortal while the other becomes immortal. Symbolically this represents the idea behind emulation and long-term preservation: giving mortal digital objects their immortal equals.

Click emulator -> start to begin the experience!
Open issues around emulation:

- Is it legal?
- Using emulators is difficult, why?
- How do I get my software right?
- How will emulation fit in my organisation?
- How to get the data from the original carrier?
- Will it be sustainable?
Next step: new project KEEP

Keeping Emulation Environments Portable

Objectives:
- Media transfer framework
- Build user friendly emulation services
- Define metadata model to support emulation
- Guarantee sustainability (portability)
- Legal study

www.keep-project.eu
Emulation as a preservation strategy

A possible outlook to the future...

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Promoted emulators

- Biosauri
  - Views: 21,717
- QEMU
  - Views: 290,947
- MAME
  - Views: 16,434
- MSX
  - Views: 849,441

Featured Emulations

- **Golf: Hole in one**
  - Play golf with this game of 1985 running on MAME.
  - Rating: ★★★★★
  - Views: 105,970

- **Microsoft Windows 3.0**
  - Experience the first widely used version of Windows.
  - Rating: ★★★★★
  - Views: 192,217

- **Chess: check-mate**
  - Imagine a 3D-view of the game chess on the PC. In 1991 it became reality.
  - Rating: ★★★★★
  - Views: 232,729

- **Norton Commander 3.0**
  - Sort your documents with the most popular file browser ever made.
  - Rating: ★★★★★
  - Views: 252,729

Want to customize this homepage?
Sign up for a KEEP Account!
Sign in with your Google Account!

What’s New

- Keep in High Definition
- Watch KEEP on your TV

Read more in our Blog
Emulation as a preservation strategy

http://dioscuri.sourceforge.net

Dioscuri - the modular emulator

Dioscuri is an 8-bit computer hardware emulator written in Java. It is designed by the digital preservation community to ensure documents and programs from the past can still be accessed in the future.

The Dioscuri emulator has two key features: it is durable and flexible. Because it is implemented in Java, it can be ported to any computer platform which supports the Java Virtual Machine (JVM), without any extra effort. This reduces the risk that emulation will fail to work on a single architecture in the future, as it will continue to work on another architecture.

Dioscuri is flexible because it is completely component-based. Each hardware component is emulated by a software surrogate called a module.Combining several modules allows the user to configure any computer system, as long as these modules are compatible. New or upgraded modules can be added to the software library, giving the emulator the capability to run these.

Dioscuri is the best choice to retain access to your old documents, games and other applications!

Latest news

3 September 2007

Dioscuri version 0.2.0 is out now! This release is capable of running various versions of MS-DOS, FreeDOS 0.9 Beta (Included in package) and ELKS (Embitable Linux Kernel Subset). The following improvements have been made:

- Fixed minor bugs in CPU instructions and added some new instructions
- Fixed keyboard status LEDs on ISA
- Improved system timer and RT
- Improved GIF for Image file selection
- Improved keyboard controller for mouse/keyboard control
- Added functionality to copy text to clipboard (text mode only)

For a complete overview of all changes in recent versions, please check the changelog. See the disk images download section for various new disk image downloads.

Download: Dioscuri version 0.2.0

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Any questions?

Dioscuri website:
http://dioscuri.sourceforge.net

Emulation project KB / Nationaal Archief:

Planets project:
http://www.planets-project.eu

KEEP project:
http://www.keep-project.eu

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