

SVG in KDE



SVG in KDE



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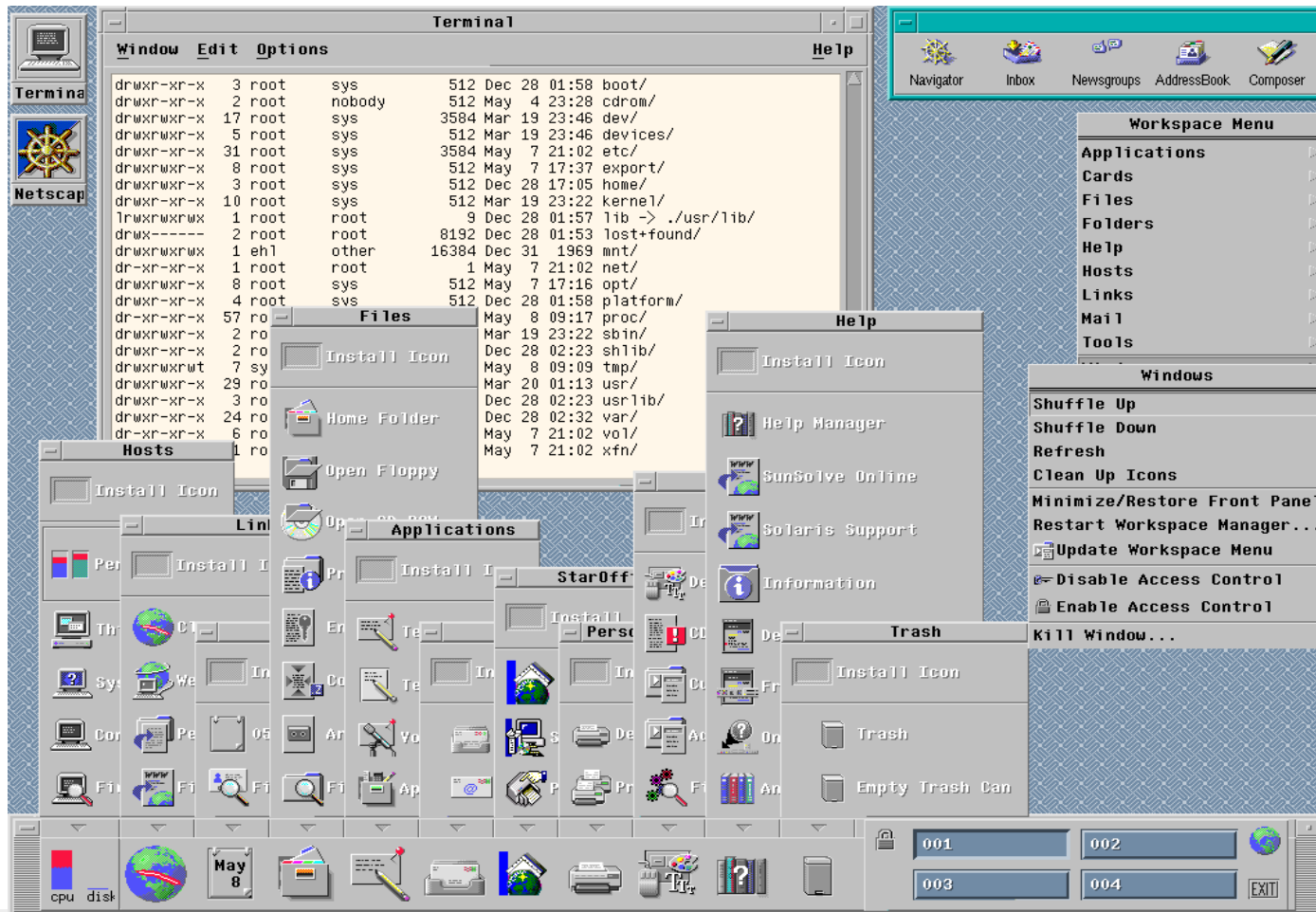
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What is KDE



Not KDE



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What is KDE



- **KDE is a Free Software project**
- **KDE is a desktop environment**
- **KDE is a set of applications**
- **Most importantly KDE is people**
 - **Connected via a certain set of moral, ethical and technological principles**

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History



- **The true beginning was the introduction of the KHTML library**
- **KSVG1 created on top of KHTML**
- **Trolltech introduces Qt 4.0 with extensively vector graphics support**
- **Trolltech creates QtSvg library**

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History



- KDE developers work on KDOM and KSVG2
- The work on KDOM and KSVG2 is incorporated into the WebKit project
- KDE developers port WebKit to Qt
- Trolltech releases Qt 4.4 with QtWebKit library

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Rendering Model



- **Influenced by the functionality**
 - **Had to work on multiple platforms therefore had to have support for multiple backends**
 - **Attractive interfaces imposed a set of design goals**

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Rendering Model



- **Center object is a path**
- **Emphasis on high performance and flexibility**
- **A large set of geometrical algorithms**
 - **Path simplification**
 - **Boolean operations**
 - **Layouting on paths**

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Rendering Model

- **Extra features**
 - **Conical gradients**
 - **Perspective transformations**

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Demos



Quick demo
(clapping encouraged)

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Current Usage



- **Icons**

- **Oxygen**
- **Much more than an icon theme**
- **Defined a lot of the visual identity of KDE 4**

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Current Usage



- **Plasma**

- **KDE technology of KDE 4**
- **“In Charge” of the desktop interface**
- **Extensive usage of themes**
 - **Colors**
 - **Dialogs**
 - **Wallpapers**
 - **Widgets**

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Problems



- **Rounded corners**
 - **The curvature changes during non-uniform scaling producing visual distortions**

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Problems



- **Small sizes**

- **Rendering vector graphics at small sizes makes a lot of the vertical and horizontal elements look blurred**
- **Essentially the same problem to font hinting**



- **Animations**

- **Lack of authoring tools**
- **Exposing the full DOM api makes it rather complex**
- **Declarative approach not good enough**
 - **Lacking path interpolation**

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Problems



- **Gradients**

- **Linear and radial gradients are difficult to work with**
- **Realistic graphics requires a lot more**
- **Diffusion curves solve a lot of the issues**

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Problems



- **Social**

- **Currently the KDE community constitutes the biggest SVG ecosystem**
- **For some reason there is not enough communication between the SVG standard group and the KDE contributors**
- **Here to change this**

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Conclusion



- **Freedom of Beauty**
- **Questions**