Marble

More than a virtual Globe

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Outline

Marble: more than a virtual Globe

Motivation

- Developers need a sophisticated but light weight geographical framework for the Linux Desktop.
- Developers need a good generic cross plattform widget to display geographical data in a manner that appeals to common users.
- Users of Free Software need an easy to use geography application that can be used to look up places and to learn about geography.

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Examples of Use

- KDE Control Center (personalisation, timezones)
- KDE-Edu (Marble Desktop Globe, KStars)
- KDE-PIM (Kontact, KAddressbook, Kopete)
- KDE Graphics (digiKam)
- KDE Games (Risk)
- Others: kworldclock, ktraceroute, ...

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Requirements of Marble Widget

- Marble uses a decent minimal free dataset that can be used offline (6 MB)
- Runs well without hardware acceleration
- Combines display vector with bitmap data
- 3D because it's more appealing and offers less distortion
- "No" startup time, fast
- Supported standards: GoogleEarth's KML, TODO: WMS
- Download data from the internet on demand, Wikipedia integration, TODO: OpenStreetMap

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State

- Marble Widget uses Qt 4.2, Marble's Canvas uses Qt's Painting architecture "Arthur"
- "Themes": different maps specified in XML files. Texture maps consisting of bitmap tiles (e.g. "Atlas", "Earth at Night", "Satellite View")
- Topographic Atlas: Compilation of vector data (MWDBII) with digital elevation model bitmap data (SRTM), Creates relief (bump mapping) on the fly.
- Satellite View: NASA's "Blue Marble Next Generation" (resolution 500m/pixel).

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Plattforms

- Linux - Part of KDE-Edu in KDE 4, seperate Qt4 version available
- MacOS X
- MS Windows
- TODO: Qtopia, adjust the interface to the requirements of "school PCs" (like Intel Classmate / OLPC) and make it run on those plattforms. Nokia Internet Tablet(?)

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Google Summer of Code 2007

- Andrew Manson: GPS integration for Marble
- Carlos Licea: Flat projection(s)
- Murad Tagirov: Improved KML support

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TODO

- Most requested: Open Street Map integration
- Improve resolution to 15 m/pixel (LandSat data).
- Further Wikipedia integration
- WMS
- alternative OpenGL backend
- Improve vector backend and data
- KPart, better integration for developers

Questions ?

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