3D Client Software - Interactive, online and in real-time

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Presentation for
Siggraph 2013,
22.07.2013
Native BS Contact 3D Client Software
Hardware Independent

Windows
Linux
Cave Systems
Nokia Smartphones
iPhone IPad, Ipad
Mac
Android + Tegra 2

Stereoscopic

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3D Globe – realtime zoom

Technology:
Mapping geospatial 2D and 3D data at the correct location on a 3D globe automatically.

Perception:
Seamless zooming from map overview to ground level and Building interior with The same online software.

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3D Vienna – realtime view

Technology:
Complete cities can be visualized in realtime with BS Contact Geo on the Internet.

Perception:
Highly detailed appearance of the 3D city. High accuracy showing trees, building sites and fully textured houses.

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Selected Geospatial Customers

- Bitmanagement
- Exxon
- Vorher Nachher
- rnv
- Bertelsmann
- Siemens
- Daimler
Cloud-interface to ACIS Kernel

Technology:
The ACIS Kernel sends X3D models to the BS Contact client for visualization. The scene graph can be manipulated remotely.
DSK Virtual Mining

Virtual Training

Trainingssystem for mining operators of Deutsche Steinkohle AG.

Testing of machines before usage in difficult environments

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Automotive - Augmented Reality
Lego Digital Box
Augmented Reality Marketing
IVN-Live Video Avatar -
Mixed Reality Supports Trust on the Internet

Technology:
The live video stream of a video conference session is mapped on the 3D face of the participant’s avatar in real-time.

Perception:
Trusted appearance of the avatar in an life-like mixed reality environment.
R&D Projects

Research Project: FINE
Project start: April 1, 2010 – now, 36 months. The Free-viewpoint Immersive Networked Experience project is focused on developing a novel end-to-end architecture for the creation and delivery of a new form of live media content.

Research Project: InterAR
Project start: December 1, 2009 – 24 months. Bitmanagement together with Fraunhofer Institute für Grafische Datenverarbeitung (IGD) jointly engages in the German BMWI funded project “InterAR – Augmented Reality in the Internet on mobile devices”.

Development Project: iDYNamicTV
Project start: 2008. Bitmanagement is part of a larger project of Telecom Italia. It is focused on Entertainment on the Web, which is a new paradigm.

Software Partner to SpaceTime3D, Inc.
Bitmanagement is a software partner of the SpaceTime project. SpaceTime is a patent-pending novel Graphical User Interface (GUI) for PCs, Tablets, Smartphones and netbook users worldwide.

Development Project: Earth Viewer
Project start: 2006. For Bertelsmann one of the world’s leading publishing houses, Bitmanagement has developed an earth viewing application for a comprehensive 3D world atlas for consumer use.

Research Project: ICE-CREAM
Project start: 2002 – 36 month. Bitmanagement was one of 10 partners of the three-year project “ICE CREAM - Interactive Consumption of Entertainment in Consumer Responsive, Engaging & Active Media” which was led by Philips and funded by the European Commission.

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Native X3D:
Geo node support with Octrees and tiling scheme.

Native CityGML:
EPSG code positioning and 200 map projections on the fly.

Mobile LOD 4 visualization:
Highly detailed city visualization >= 10 cm detail.

R&D: 3D Portrayal Interoperability Experiment

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www.opengeospatial.org
R&D: BS Content Studio

Toolchain support
Competitive advantage 18 months
Native Apps and Web Apps
Why a tool for the 3D Web?

For Web3D you need a lot of skills.

You need:

Knowledge about 3D graphics
Knowledge about XML
Knowledge about networking

Artistic skills and programming skills...
Left brain and right brain...

So we have 3 design principles: easy, easy, easy

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BS Content Studio - design principles

- X3D conforming
- Interactive content
- Multi-media content
- Fast production and management of scenes
- Compose – Enrich – Embed

Optimization of
- rendering speed
- web-delivery
- embedding in websites

Native Apps output cross platform with the BS Contact 3D engine windows, mac, iOS, android

X3DOM output for Webapps

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BS Content Studio
- design principles

Current features of BS Content Studio
- Transforming (translate, rotate, scale, manipulate center) from scene elements
- Editing the appearance of shapes.
- Creating animations by manipulating fields
- Optimizing scene by static batching or instance batching
- Exporting into VRML, X3d, X3DB, X3DOM
- Optimizing or Reducing mesh complexity by planar or cell reduction
- Scene property editing for Worldinfo, Background, and Navigation
- Display of route graph for easy editing
Please download and try BS Content Studio
www.bitmanagement.com/en/download/studio
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Thank you!
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Bitmanagement is uniquely suited with existing know-how and software to elaborate a central and holistic view on your 3D data.

This makes the life cycle of your products, with actual states, planning states and alternatives interactive, web-enabled, visible and usable.

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