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# A Web 3D Tiled Map Viewer Based on CityGML Models

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# Agenda

## Overview

**System Components** 

🗆 Client

Tile Cache

Server

**Tile Creation Performance** 

🗆 Demo

Conclusions





## **Overview**

- Web application for the interactive visualization of 3D cities
- On any Web browser, without WebGL and without additional plugins
- Cities modelled in OGC CityGML







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## **Open Layers Based Client**





## **Tile Cache**

## Internally developed

- But no special functionality is needed: it could be any other one
- A layer in the tile cache = view + zoom level

### Zoom level 1, North, South, East, West = 4 different layers

The client is in charge of making this "transparent" to the user







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## Server

## Aristoteles Viewer

💠 Java

Interactive visualizatio of CityGML 3D models

## Jetty provides the HTTP interface

The interface is inspired by the GetScene operation as defined by the OGC Web 3D Service draft specification





## **Tile Creation Performance**



## Demo

# http://www.youtube.com/watch?v=PFrszcnw1FM Video







## Conclusions

## Client/server prototype to navigate CityGML 3D cities

Any Web browser, no WebGL, no plugins

## 3D renderer component can be changed

As long as an interface similar to the *GetScene* operation in the OGC Web 3D service is provided

# Fixed viewpoints, zoom levels and tiling provide very good performance

- For certain uses/users this is too constraining, but this also happens with 2D tiled maps
- Viewpoints and navigation are similar to those in the oblique aerial images that several providers are currently offering





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