



Interactive X3D Graphic

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Novi Sad, 2009



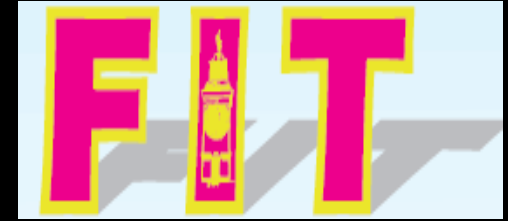
- Interactive X3D tutorial that is able to show basic properties of the main object.
- Characteristic of tutorial
 - Simple
 - Attractive
 - Educational

Assignment #4



- From CAD model make an X3D scene
- Ask others did they like it and be honest about it when you make the presentation
- Don't forget to make web page, so the people outside your RLAB could see it

Object of interest : Hubble Space Telescope



We want to show the user:

- names of the basic Hubble components
- information about Hubble's orbit
- opportunity to circle around the Hubble

X3D Hubble components

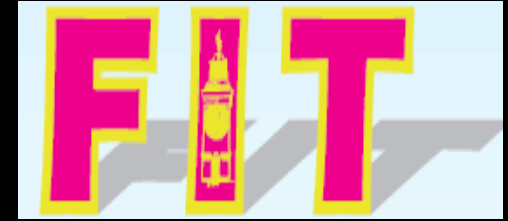


- Solar array
- Rear compartment
- Front compartment
- Aperture door
- Antenna
- Shield



- For description we use X3D syntax
- Every component is represented as a node in X3D source code

X3D



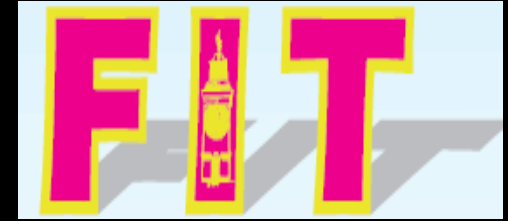
- X3D is ISO standard
- XML-based file format for representing 3D computer graphic
- X3d scenes works over the internet via Http servers, a local disk drives or CDs and even as standalone email and chat attachments

X3D used nodes



- Inside of `<xml>` and `<X3D>`
 - Scene
 - Shape
 - Appearance
 - Material
 - Transform
 - TouchSensor
 - Text
- In addition to nodes that represent the shape, sub nodes can describe different features of that shape

Additional X3D nodes



- **TouchSensor node**
- **Text inside Billboard Node**
- **Script node (Java script)**
 - function for processing exit
- **Route - for exchange information between nodes**

X3D file inside HTML



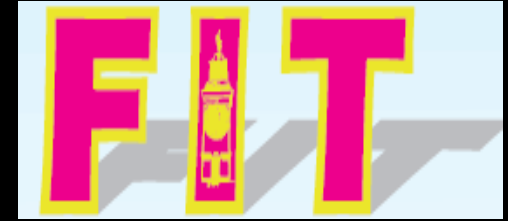
- .X3D content can be integrated into web pages
- We put .X3D scene inside `<embed>` tag
- On html page, we provide some additional information about Hubble
- To start X3D inside web page all we need is X3D browser OCTAGA

Hubble object



- Hubble is able to move around
- Divided into several selected and defined field
- Every selected and defined part has a event assigned
 - Interactive

Conclusion



- X3D is now part of the Web compatible information infrastructure
- XML is license free, platform independent and well supported
- We think the usage of 3D graphics will be very useful to enhance features of some services like Wikipedia



Thank you for you
attention