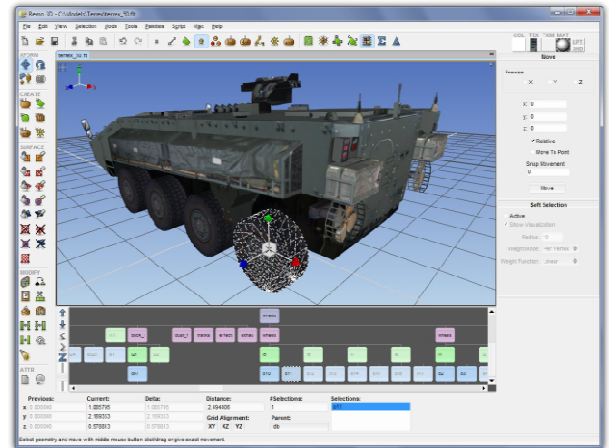# REMO 3D

Remo 3D™ is an effective tool for creating and modifying 3D models intended for real-time visualization. Remo

3D's primary file format is OpenFlight® and it allows for importing from and exporting to different file formats.

Key Features:

Real-time Characteristics	Multi-platform support (Windows & Linux)
Extensive Import & Export Support	Supports Open Scene Graph
Automation of tasks	User friendly
Easy to use	Supports OpenFlight® file format
Imports from many types of formats	Exports to the many types of formats
Supports many image/texture file formats	Multiple simultaneously loaded models
WYSIWYG 3D model view	Extensive list of features
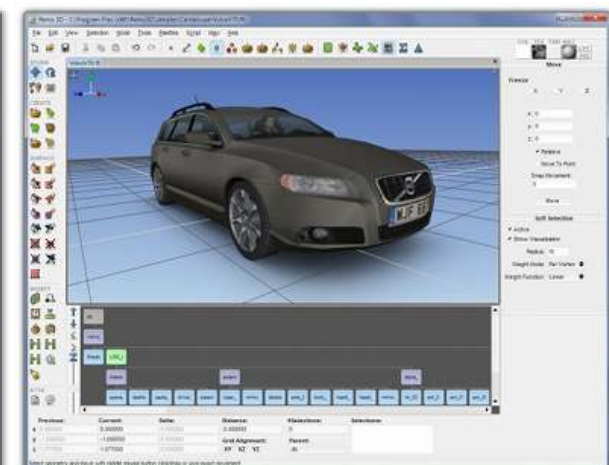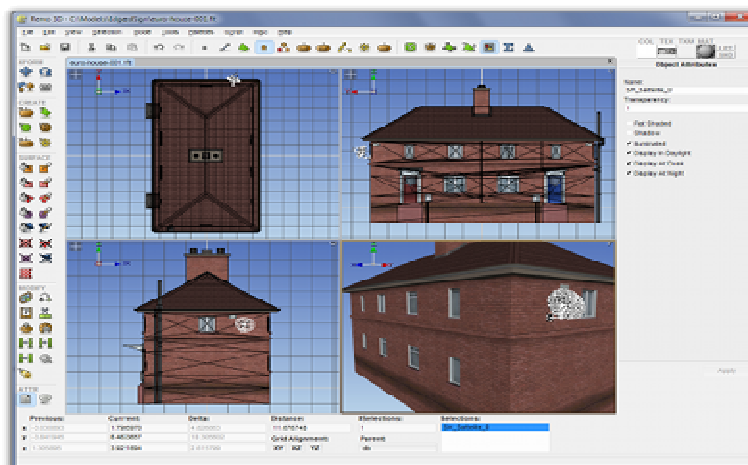
Remo 3D™ v2.3 Features:

- Runs on Microsoft® Windows® 7/Vista/XP/2000 or Linux operating system (32-bit or 64-bit)
- Supports OpenFlight® file format version 15.7 to 16.2 (see user's guide for details)
- Imports from the following file formats:
  - 3DC Point Cloud (.3dc) , 3D Studio MA X® (.3ds), AC3D™ (.ac), COLLADA™ 1.4.1 (.dae), Designer Workshop (.dw), Autodesk® DXF (.dxf), Carbon Graphics GEO (.geo), LightWave® (.lwo / .lws), Quake Character Models (.md2), Alias® Wavefront OBJ (.obj), OpenSceneGraph 3.0.1

Deprecated ASCII (.osg), OpenSceneGraph 3.0.1

- Deprecated Binary (.ive), OpenSceneGraph 3.0.1 Archive (.osga), OpenSceneGraph 3.0.1 Binary (.osgb),
- OpenSceneGraph 3.0.1 Text (.osgt), OpenSceneGraph 3.0.1 XML (.osgx), VBS2 P3D (.p3d), Performer™ (.pfb),
- Stanford Triangle Format (.ply), Stereo Lithography Binary (.stl), StereoLithography ASCII (.sta), ESRI Shape (.shp), Direct X (.x).

- Exports to the following file formats:
  - 3D Studio MAX® (.3ds), COLLADA™ 1.4.1 (.dae), DOT (.dot), Alias® Wavefront OBJ (.obj), OpenSceneGraph
  - 3.0.1 Deprecated ASCII (.osg), OpenSceneGraph 3.0.1 Deprecated Binary (.ive), OpenSceneGraph 3.0.1 Binary
  - (.osgb), OpenSceneGraph 3.0.1 Text (.osgt), OpenSceneGraph 3.0.1 XML (.osgx), VBS2 P3D (.p3d), StereoLithography Binary (.stl).

- Supports the following image file formats for being used as textures:
  - SGI® image file format (.rgb, .rgba, .int, .inta), Microsoft® Windows® bitmap (.bmp), Direct Draw Surface (.dds), Graphics Interchange Format (.gif), Joint Photographic Experts Group (.jpg), Portable Network Graphics (.pang), Portable anymap (.pnm, .ppm, .pgm, .pbm), Targa (.tga), Tagged Image File Format (.tif)

- Multiple simultaneously loaded models
- WYSIWYG (what you see is what you get) 3D model view
- Multiple 3D model viewports
- Scene graph node view with expand/contract, zoom, drag and drop
- Output of current, previous and delta coordinates
- Output of selected node names and number of selected nodes
- Selection by picking, rectangle or node name
- Selection by attributes
- Level-of-detail (LOD) switching
- Perspective/orthogonal view
- Scribed/solid/wireframe view
- Lighting control
- Enabling/disabling of multi-texture layers
- Grid, completely user-definable
- Snap to grid
- Snap to vertices, edges, polygons, etc.
- Full control of selection pivot point
- Convenient gizmo handles for transformation tools
- Soft selection on transformation tools, for modeling of rounded surfaces
- Hiding and isolating of geometry
- User-definable view frustum
- Automatic or manual near/far distances
- Shrink polygon visualization
- Visualization of normals
- Visualization of vertex numbers
- Large vertex markings
- Presentation of statistics of different parts of the scene graph
- Preview of degree-of-freedom nodes
- Save preferences to disk
- Capture viewport to image file
- Cut, copy and paste geometry
- Multiple undo/redo commands
- Colour palette:
  - Red-green-blue (RGB) or hue-saturation-value (HSV) edits, Open and save colour palettes

- Texture palette:
    - Full control of texture attributes (Open Flight ® ATTR files), Change and remove texture paths, Remove unused textures, Open and save texture palettes, Flip DDS and PNM images vertically
- Texture mapping palette:
    - Edit existing texture mappings, Remove unused texture mappings, Open and save texture mapping palettes
- Material palette:
    - Full control of ambient, diffuse, specular and emissive colours, Full control of shininess and alpha parameters, Remove unused materials Open and save material palettes
- Light point palette:
    - Full control of light point appearance and animation attributes, Remove unused light points, Open and save light point palettes
- Shader palette:
    - Connect shader program files, Support for OpenGL Shading Language, Support for Cg shading language, Remove unused shaders, Open and save shader palettes
- Tools:
    - Move geometry, Rotate geometry, Scale geometry, Apply transformation matrix, Create node, Create polygon, Create, External reference, Create disk, Create sphere, Create light point, Apply colour, Apply texture and texture mapping, Apply material, Remove texture and texture mappings, Remove material, Get colour from node, Get texture and texture mapping from node, Get material from node, Map texture - 3-point, 4-point, cylindrical or spherical, with support for multi-texture and UV editing, Mirror geometry, Reverse polygon, Extrude geometry, Revolve geometry, Quantify vertex positions, Slice geometry, Split edges and polygons / triangulate polygons, Merge polygons, Shad e geometry (calculate normals), Simplify geometry (decrease detail level), Subdivide geometry (increase detail level), Modify all OpenFlight® node attributes, Apply comment s on nodes
- Script support in Lua for all functionality interactively available in Remo 3D
- User-defined macros (script + parameters) in Remo 3D menu, making it possible for users to create new tools

Few customer references:

Axis Aerospace	Electronics Corporation of India (ECIL)
SAAB	CUBIC, Denmark
BAE Systems, C-ITS	Vires
Department of National Defence Canada	Defence R&D Canada
IMP	F7 Skaraborg Wing
CINECA	Compro
Cantaloupe 3D	ST Software
Virtek - 3D Maritime content	ITA BC