DESIGN SOFTWARE – IRONCAD (*.ics)

Versatility in collaborating with various CAD systems is important to us, and can include using the preferred CAD software of our clients. However, since 2011 our preferred software for 3D modelling and 2D drafting has been IRONCAD. Previous to that it was SOLIDWORKS.

Unlike other CAD software, IRONCAD is unique in that it uses both ACIS and PARASOLID geometric modelling kernels working in collaboration. This is advantageous as each kernel has its own strengths, weaknesses and peculiarities (which change with each release).

When importing and exporting, the preference should be to use the native file format of the kernel, rather than translating to and from CAD neutral file formats such as STEP. Therefore, for clients using PARASOLID based software, we use the PARASOLID file format (*.x_t). For clients using ACIS based software we use the ACIS file format (*.sat).

Software using ACIS	Software using PARASOLID
ALIBRE DESIGN	IRONCAD
ARES COMMANDER	MICROSTATION
BRICSCAD	SIEMENS NX
IRONCAD	SOLID EDGE
KEYCREATOR	SOLIDWORKS
SPACECLAIM	VECTORWORKS
....	....

SHAPEMANAGER

AUTODESK products AUTOCAD and INVENTOR and FUSION360.

This was forked from ACIS 7.0 in 2001. As a result, when exchanging models with AUTODESK software ACIS 7.0 (.sat) is typically used.*

See separate documents regarding Dual Geometric Modelling Kernels and Modelling Modes.

DESIGN SOFTWARE – IRONCAD DRAFT (*.exb and *.dwg)

IRONCAD DRAFT is a genuine 2D DWG Editor for creating 2D drawings; whether they be from Generated Views of IRONCAD 3D models or from 2D models (in Model Space). It can also make use of 2D Blocks and Styles from other *.dwg files. While the native file format is *.exb, all drawings can be saved as *.dwg on request (without any loss in functionality).

DESIGN SOFTWARE – BRICSCAD (*.dwg)

BRICSCAD is a product of BRICSYS, which is a founding member of the OPEN DESIGN ALLIANCE (ODA). This organisation provides standard interoperability solutions for AUTOCAD, NAVISWORKS, REVIT and MICROSTATION files.

BRICSCAD is a versatile 2D/3D DWG Editor, and is the primary software that we use when collaborating with AUTOCAD (*.dwg) and MICROSTATION (*.dgn), whether in 2D or 3D.

BRICSCAD BIM includes "Building Information Modelling" functionality; where the BIM data is stored in IFC format within the *.dwg file. The key and fundamental difference with BRICSCAD BIM is that it starts with creating the "Geometry", and then adds the "BIM data" afterwards (with both automatic and manual BIMIFY tools). As a result, the geometry can be created by BRICSCAD or IRONCAD (or other). The BIM model can then be exported as an *.ifc file for exchange with other BIM software such as REVIT, ARCHICAD, TEKLA, etc.