IronCAD

magnacad

Integrated Technologies 2024

IronCAD

IronCAD significantly reduces manufacturing barriers and increases engineering productivity with intuitive 3D and 2D solutions for rapid design and seamless collaboration enterprise-wide.

Innovation & Productivity

IronCAD was founded in March 2001 with the aim of developing user-focused 3D design software to improve productivity and help designers and engineers achieve success in their respective fields. Since then, we've created numerous 3D modeling tools that have forged new directions for engineering design software.

Transforming CAD from Concept to Creation

3D Design Methodolgies

IronCAD provides a multi-modal method of 3D design approaches that co-exist universally in a single scene design environment. IronCAD allows you to choose on-demand which method of modeling you prefer for the task at hand.

Structured Part Design Mode

This design mode is the traditional feature history-based parametric modeling methodology typically found in older and more common 3D design software. SPM provides support for 3D multiple body capabilities.

Innovative Part Design Mode

This design mode is IronCAD's unique and patented design methodology that combines catalog-based drag-n-drop and sketch-based approaches in a synergistic feature-based environment.
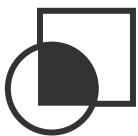
Dynamic Part Design Mode

This design mode is IronCAD's unique and patented design methodology in which you combine the abilities of Innovative design mode and the more history feature based approach of Structured design mode using an on-demand basis. In essence, this mode provides the most flexibility and power of all old and new cad design methodologies in a single environment.

Direct-Face Part Design Mode

This design mode allows the end user to edit 3D models at the face level for extreme ease of use. Explicit modeling as it is frequently referred to, in most systems is non-history based, but with IronCAD it can be history-based if used while in Structured part design mode. DFM is used mostly in Innovative Part mode since it maintains the integrity of unaffected features of the part

Boolean Part Design Mode

This design mode allows you to generate models by combining parts in either a positive or negative approach to either add or remove material. Boolean features are common in most 3D CAD applications, however unique to IronCAD is the ability for the Booleaned parts to retain their feature history structure even after the Boolean operation. So there is never a loss in fidelity to a parts structure, making editable a snap.

Surfacing Design Mode

This design mode allows you to generate organic and complex models using IronCAD's surface creation tools. Surfacing can be used entirely to generate 3D models or they can be used in modifying solid models as a hybrid form of models that are both solid and surface based.

3D Design Methodolgies (con't)
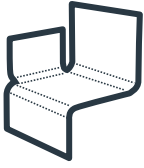
Sheet Metal Design

Unique to IronCAD is its ability to design sheet metal parts using Drag-n-Drop tools as well as sketched based tools. This collaborative effort makes modeling sheet metal parts the most productivity and user friendly. Also this is created in the same design environment so there is no need to switch a process- specific design environment which is counter-productive.

Using the existing unfold a solid/surface command and the sketch bend, we are able to provide a command to convert existing solids and surfaces (or even imported sheet metal) to an IronCAD sheet metal feature. Once converted, you can continue to edit the sheet metal part as if it was a native sheet metal part.

Parametric Modeling

IronCAD provides on-demand parametric modeling capabilities along with geometric/dimensional constraint relationships in all the above listed design modes. This ability varies slightly depending on design modes. This is unique to IronCAD because some competitive software allows parametric modeling in very restrictive ways that IronCAD has learned to adapt around.

Assembly Modeling

Although assembly modeling is evident in most all cad software, Only IronCAD solutions provide the ability to create, edit, restructure, and manage complex assembly structures in a single design environment without the need to switch to an assembly-specific design environment. This allows extreme flexibility of maintaining assemblies without complex procedures or expensive add-ons. IronCAD allows the user to design in either a top-down assembly approach or a bottom-up assembly approach. Also, assemblies can reside as individual scene files or with externally linked capabilities to accommodate design preference or data management requirements (if implemented).

IronCAD has a host of tools to help your performance with large assemblies such as "Large Assembly Mode" and "Light Version (Shrink Wrap)" catalog sets and conversions.

Structural Steel Modeling and Weldments

Machine design inevitably involves the use of structural steel members for items such as frames for tables, building structures, crane supports, etc. This process involves building a profile that can consist of 2D and 3D curves that layout the path of the members to trace followed by end conditions for members that are connected or intersected. The structural steel processes is a specialty application where the framework has been added. You can use these tools to build a single part consisting of many different members and sizes that can be trimmed to define the appropriate end conditions. In addition, these parts will automatically be called out in the Bill of Materials with the name and length of each member to give accurate cut lists for manufacturing.

Dual Kernel Modeling Technology

Only IronCAD solutions utilize both the ACIS® and PARASOLID® modeling engines to simultaneously solve the geometric creation of your models. By having both engines driving the creation (whereas all other software only use one) allows you eliminate virtually any inability to create a 3D model due the limitation of the underlying engines weaknesses. So where a model will fail to generate in competitive software, it's no problem in IronCAD. Also Dual Modeling Kernel Technology enhances the ability to share your 3D data more effectively with other CAD software and downstream applications

Point Cloud Data

IronCAD allows for importing Point Cloud Data and allowing to convert it to usable geometry for model creation and or analysis

Van Geldern Machine Company Inc.

IronCAD

Connecticut, USA

For over 25 years, U.S.–based van Geldern Machine Company, Inc. has been providing mechanical engineering and design services, specifically custom machinery and tooling design, to a variety of industries.

"Rapid 2D to 3D"

"IronCAD's ability to model without constraints has allowed us to design more rapidly," says Steve van Geldern, Owner of van Geldern. *"The rendering and animation features have allowed us to secure new customers and help prospects visualize their ideas. IronCAD is a great software tool and has been a fantastic business partner over the many years we have worked together."*

3D Environment Design Tools

IronCAD provides a multitude of innovative 3D design tools and intelligence to help limitless design dexterity. IRONCAD 3D modeling tools empowers designers to focus on design by giving them an intuitive platform that mirrors how we interact with the physical world.

Library of Catalogs

All IronCAD products have included catalogs of pre-determined shapes, colors, textures, fasteners, gears and more to help your design along. Additionally you can create and customize your own catalogs as needed to build your libraries to further speed up your designs. Also, catalogs are a primary component of IronCAD because they are more than just libraries they can act as project folders, workbooks, and scratch pads and allow you to store any type of Windows® based files.

Part Content & Management

Through our partnership with CADENAS GmbH, IronCAD users can launch the free PART community online library by using a ribbon bar button inside the IronCAD Design Collaboration Suite products. Directly browse catalogs or use a powerful search engine for cross-catalogs searches based on the dimensions or other technical properties of the part attempting to locate. After selecting a part, users have access to a real-time 3D preview and a summary of all its Bill of Materials (BOM) attributes. Users can then download the desired part to load into the IronCAD Design Collaboration Suite products to increase design productivity and reduce time to market by leveraging the supplier content directly into the design. Also included are free plug-ins for GrabCAD, TraceParts, and SketchFab.

IntelliShape Modeling

IntelliShapes™ are IronCAD's trademarked term for a "feature". An IntelliShape is a building block of a complete 3D part (i.e. Blocks, holes, surfaces etc.) However, unique to IronCAD is the ability to assign intelligence to these shapes to add behavioral modeling abilities to design even quicker. Some intelligence could be; shelling, blending, assembly behavior, orientation, tapering (draft) and parametric abilities.
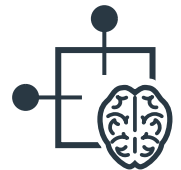
Dynamic View Sensitivity Modeling (DVSM)

DVSM is IronCAD's innovative viewing intelligence at the core architecture that allows IronCAD to "watch" what you are modeling and adapt IntelliShapes resizing and orientation based on your field of view. It's like having an assistant handing you tools as you need them without even thinking.

SmartSnap Technology

Some competitive software has some limited form of snapping capabilities in their design environments, however IronCAD was the developer of this technology in the late 1980's and holds robust patents on the technology. Therefore still to this day, only IronCAD can achieve a multitude of SmartSnap behaviors that improve the modeling experience that others cannot match. SmartSnap technology is available at all levels from 2D cross-sections, parts, features, ghosted parts, surfaces and even across multiple parts whether in assemblies or not.

Behaviorial Modeling

IronCAD has integrated at its core the ability to assign basic behavioral modeling intelligence most of which works seamlessly as you model, but can be altered and modified as needed. Behavioral modeling such as "Attach to surface" which automatically knows to attach a shape to another shapes surface and remain attached regardless of modifications.

3D Environment Design Tools (con't)

Design Variations (Variant Models)

Design variations is the ability to generate a parametric part and through its parameters to assign new variations of the part to create a "family of parts" driven by a "table" of parameters.

SmartAssembly Technology

Developed by IronCAD, SmartAssembly™ technology allows you to assign connection points and paired connection points to parts and assemblies that enhance the behavioral modeling experience. SmartAssembly™ tools can "build" your design automatically by simply dragging components from a catalog onto components in the scene, SmartAssembly™ then knows how to connect to the part and which way it should orientate thus saving time. Many customers use this technology in the Bid modeling processes for their sales efforts.

In addition, you can combine parametrics and variant models to further enhance the SmartAssembly™ capabilities so as you drag parts onto each other, not only will they know where to attach and orientate, but resize to match the target part. This tool is entitled "Smart eBehavior"
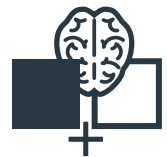
IntelliStretch Technology

IntelliStretch® Technology was developed by IronCAD recently which allows you to stretch parts and/or assemblies to quickly adapt similar product goals without the need for parameters. For instance, if you have designed a complete conveyor belt system and its 20" wide then after your design is complete you're told the machine needs to be 30" wide, that's where IntelliStretch ® Technology comes to play. Select a point (plane) in which the assembly will stretch about, enter 10" to stretch and wallah, IronCAD widens the assembly including all the individual parts that are affected (or required). IntelliStretch works independently of any parametric associations or constraints, so you eliminate the time consuming and often frustrating need to create a fully parametric part or assembly in order to "stretch" your design.

Auto-Feature Recognition

Although many 3D CAD solutions on the market today offer some sort of feature recognition, only IronCAD provides it on-demand and as needed. Its IronCAD's unique ability to simple select a face(s) and/or either a BREP or other "dumb" model and convert the selection to an intelligent feature that can be edited as though it was created natively in IronCAD. Auto-Feature not only is a feature recognition tool, but also doubles as a selection tool as well. One example is if you wish to add a fillet (blend) to an entire part and don't want to select each part edge, use the Auto-Feature and it will do it for you.

"Cruising" Technology

Cruising is unique to IronCAD solutions, it provides the ability to move features of a part anywhere on the part with a simple drag movement. Via the shapes default behavioral intelligence when "cruising" it knows how to remain orientated correctly anywhere on the part even on curved faces. This is ideal in conceptual design phases. You can use "Cruising" in connection with 3D constraints and other tools to further enhance the productivity of conceptual modeling experience.
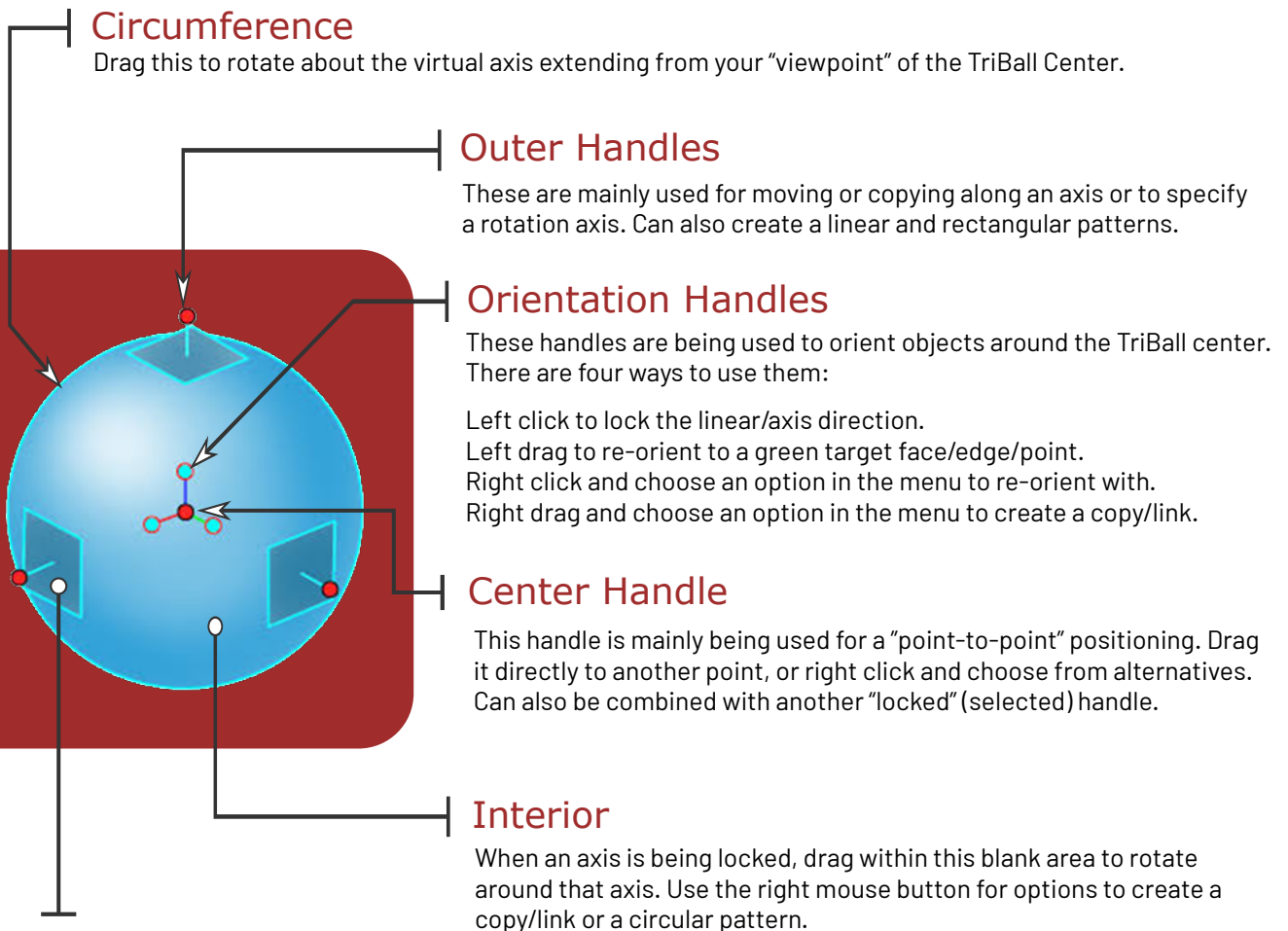
Multiple Coordinate Systems

IronCAD allows users to generate an unlimited amount of coordinate system if needed. Typically for most designers, coordinate systems are not needed to create 3D models and assemblies in IronCAD. However on occasion they can prove vital if the design requires that parts and assemblies need to reference a common datum point as is the case generally in the Aerospace industry.

3D Environment Design Tools - **The TriBall**

"The TriBall®, the most useful tool in the CAD industry" as one respected industry analyst stated. The TriBall more recently has been attempted to be duplicated in just about every cad software on the market. However, due to robust patented technology they will ALWAYS fall short by a mile. IronCAD was the developer of the TriBall back in the late 1980's and still to this day no competitive product can match its power. Its ability to position components in extremely complex 3d spatial restrictions is an example why the analyst stated his comments. Some of the TriBall's abilities beyond complex 3D spatial position are its abilities in Mirroring, Patterning, Copying, Linking and more. It is the heart of IronCAD and is treated as such. The TriBall manipulates any component evident in the 3D design environment from features, parts, models, lights, and cameras.

Circumference
Drag this to rotate about the virtual axis extending from your "viewpoint" of the TriBall Center.

Outer Handles
These are mainly used for moving or copying along an axis or to specify a rotation axis. Can also create a linear and rectangular patterns.

Orientation Handles
These handles are being used to orient objects around the TriBall center. There are four ways to use them:

Left click to lock the linear/axis direction.
Left drag to re-orient to a green target face/edge/point.
Right click and choose an option in the menu to re-orient with.
Right drag and choose an option in the menu to create a copy/link.

Center Handle
This handle is mainly being used for a "point-to-point" positioning. Drag it directly to another point, or right click and choose from alternatives. Can also be combined with another "locked" (selected) handle.

Interior
When an axis is being locked, drag within this blank area to rotate around that axis. Use the right mouse button for options to create a copy/link or a circular pattern.

2D Planes
Left drag here to move in the plane represented by the square handle.
Left click on a handle to lock the plane and then move TriBall with the Center Handle to snap to other objects.
Right click for options to snap "in height" of green target faces/edges/points.
Right drag and choose an option in the menu to move or create a copy/link or to create a rectangular pattern.

Simulation and Analysis

IronCAD provides a multitude of advanced simulation and analytical tools to ensure your designs meet the vigorous demands of real life. The ability to test and analyze your 3D virtual models for structural issues and clearances is imperative in today's market. With IronCAD you can rest assured that the innovative tools included will meet every design requirement to ensure proper engineering.

Mechanism Kinematics and Collision Detection

IronCAD has integrated the ability to perform real-time mechanism movements that provides collision detection. They can also be use when generating animations to better convey design intent to potential customers and vendors. Various mechanism conditions can be reviewed to determine the mechanisms feasibility in the design intent.

Extended Mechanisms by Limits

A constraint option for linear dimensions to define a limit range for your mechanism. Simply specify the maximum and minimum range and the object will be free to move in this range within the mechanism mode operations

Interference Checking

IronCAD has the ability to select multiple parts and/or assemblies to determine if there is interference inherent between them. If an interference is detected a dialog pops up indicating the affect parts and highlights them in red in the scene.

Minimal Distance Analysis

IronCAD provides the ability to check parts to ensure that a minimal distance is maintained between them.

Part/Assembly Analytical Data Extraction

IronCAD at its core allows designers to extract various analytical data from a part such as Moment of Inertia, Surface Area, Center of Gravity, Weight and Mass and more.

Multi-Physics for IronCAD

Multi-physics for IronCAD is a seamlessly integrated multi-physics FEA simulation tool that works directly in the IRONCAD interface. Simply add material, forces, and constraints to an IRONCAD model and hit the "Auto Solve" button to generate analysis results. If subsequent modifications are made to the model, built-in associativity

MPIC focuses on ease of use for CAD users and provides fully coupled multi-physics with stress, thermal, and electrostatic which includes the following analysis types:

Static/Steady State
Dynamic/Transient Response
Modal/Vibration Modes
Instability Buckling
Rigid Body Kinematics
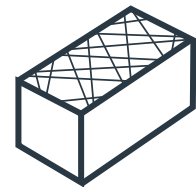
MPIC is included with full product capabilities with the standard IRONCAD solution as a node-limited version allowing you the ability to experiment with your designs. Even though the included version is node-limited, MPIC's technology using SefeaTM (Strain- Enriched Finite Element Analysis) gives you extended capabilities to test your products at a lower mesh level. SefeaTM is the newest enriched finite element formulation developed specifically for low-order 4- node tetrahedron elements commonly used in CAD simulation. It achieves the same accuracy as 2nd order elements, but is more robust, without mid-side-node noise, and requires much less computing cost. Seamlessly integrated, simply add a multi-physics analysis to your IRONCAD model. Add material, forces, constraints, and hit the AutoSolve to quickly mesh and return your analysis results. Make modifications on the IRONCAD model and

MPIC is developed and designed specifically for CAD design simulation by AMPS Technologies Company. Please refer to our "Multi-physics for IronCAD" brochure for complete details.

Braho
Machinery, LLC

Ohio, USA

Braho Machinery is an engineering firm specializing in mechanical services for steel producers and processors. By combining the disciplines of mechanical engineering and metallurgy, they meet the need for expert knowledge about processes, machinery, controls, and how they work together.
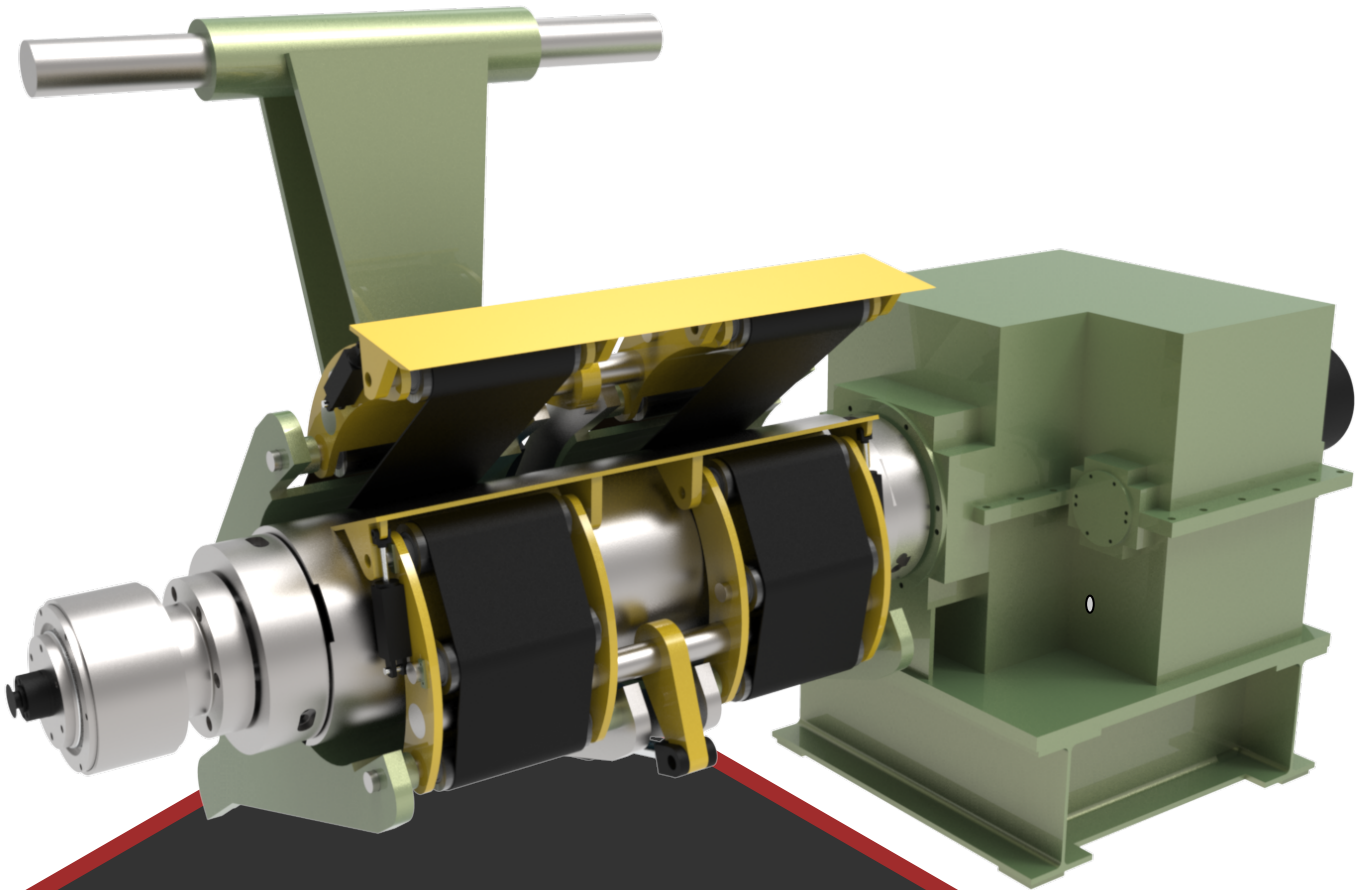
"Scale-able Engineering Solution"

"Much of our business comes from helping the steel industry prepare for next-generation advanced high strength steels required by the automotive industry," said Brian Braho, owner of Braho Machinery. *"We first began our search for a 3D design solution more than 10 years ago. We are very happy with our decision to use IronCAD. It has become an essential part of our design process. The recent addition of Multi-physics for IronCAD has really helped us take our designs to the next level."*

Visualization and Animation

IronCAD's rendering and animation capabilities are built directly into the core architecture so you never have to start over or redo your 3D models in order to achieve stunning realistic renderings and animations. All IronCAD solutions have integrated a best-in-class rendering engine to perform high quality renditions of designs so realistic they are often mistaken for real images.

Rendering Content

As part of the IronCAD Gold Partner program, Dosch Design delivers sample High Dynamic Range Images (HDRI) that can used in IRONCAD's/INOVATE's/IRONCAD DRAFT's Advanced Realistic Rendering free of charge. These samples images include both high and low resolution that can be used for accurate reflections or for lighting sources. Images of the HDR images at integrated into the core architecture. You can purchase additional images as desired by third party vendors.

Real-Time Rendering Control

IronCAD allows you set various rendering options in your modeling environment such as reflections, shadows, ambient lighting, and more. By setting up some of these options, you can design in a more realistic environment as well as generate images you can share with your supply chain and customers of "lifelike" products before even venturing into the full blown rendering capabilities.

Drag-n-Drop Animation Framework
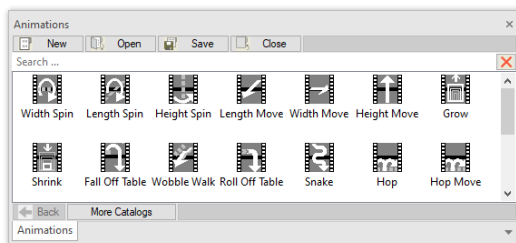
The Animation Catalog (Animatn) offers a collection of simple predefined movements. You can use these animations to quickly add motion to your parts or as starting points for more advanced custom motions that are refined by editing their properties. The predefined motions include basic spins and linear movements, as well as a few more complex motions, such as bounce. These predefined SmartMotions™ can be dragged and dropped on any object in your scene. Facet parts and geometric parts can be animated, as well as cameras and lights.

Key-Frame Animation Framework

You can create and modify custom animation paths. These paths can be applied to any shape, part, or assembly. A set or sequence of "key frames" or "keys" defines the path of an animated object. Once a sequence is created, positions are automatically computed at regular intervals between the defined keys. Each key frame can be edited using the TriBall and other tools already available in the 3D design environment.
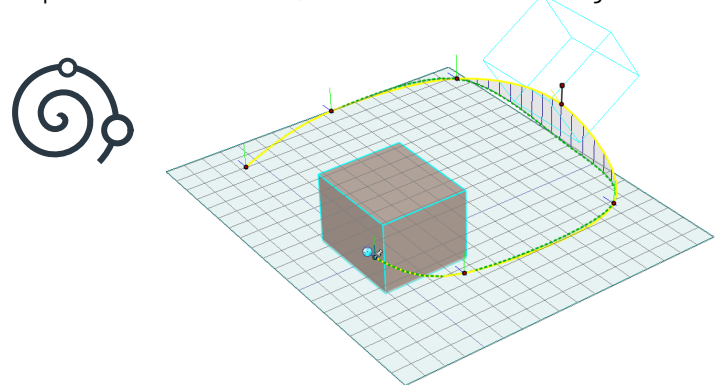
SmartMotion Editor

The SmartMotion Editor allows you to adjust the length of an animation and to synchronize the effects of multiple SmartMotions™. You can also use the SmartMotion™ Editor to access animation paths and key properties sheets for advanced motion editing. The SmartMotion™ Editor window will always be displayed on top of other windows. Although the SmartMotion™ Editor provides one way of accessing the properties of SmartMotions. and their key frames, much of the power of SmartMotions™ resides in their properties sheets.
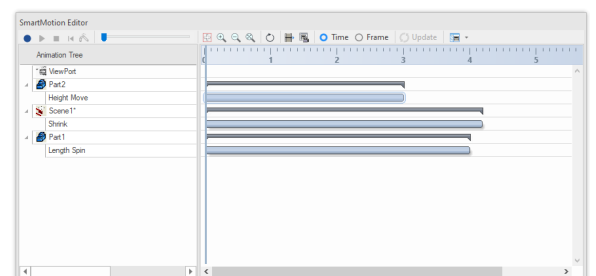
Collaboration and Data Sharing

Sharing your ideas and communicating them effectively is critical to new product introduction. IronCAD provides the solutions to make this process as easy as a click. These tools enable improved communication and faster decision-making, which helps reduce design errors, improve quality, increase productivity, and most importantly... Customer Satisfaction!

CAD File Translation

With IronCAD's Design Collaboration Suite, engineers communicate more freely. Dual ACIS and Parasolid kernels allow precise, error-free import and export of native SAT and X_T files as well as common file formats like IGES, CATIA V4, and STEP and beyond.

3D PDF Support

Interactive 3D PDF files look exactly like the original 3D design, regardless of the application used to create it or the environment in which it's viewed. IronCAD supports the ability to export 3D PDF files from the IronCAD Scene. This capability allows users the ability to share and collaborate on their 3D designs in a lightweight format. 3D PDF's can be used for visualization only or can be used for markup collaboration. (Markup capability requires Adobe® Acrobat™ 3D software)

SmartMarkup

IronCAD's commitment to sharing design content throughout the supply chain and the extended global team has fueled the creation of more powerful collaboration tools. Capabilities such as SmartMarkup™ allows users to collaborate with extended teams to speed up the development process. Designers and other collaborators can move beyond the traditional text based markups to apply meaningful change requests on data that is clearly communicated. Typically, basic markups are not clear and involve back and forth communication to make it clear. Using SmartMarkup, the changes are performed on the model so that everyone can clearly understand the desired change. Designers can then accept, reject or further optimize design changes directly on the real design models to speed product designs into production.Markups can be saved so that they can even be stored in data management systems for tracking RFQ's

Cloud-Based Web Viewer

In addition there is Share 3D which allows you to share your designs on the cloud to anyone for Free. The link is active for 7 days upon expiration you can share again if desired.

Multi-Platform Web Viewer

Share your designs across any device with our new 3D Web Viewer, which supports viewing and tree navigation in any browser supporting WebGL. Export designs to a local drive or save to a web server location to share the lightweight graphical model with colleagues and collaborators.
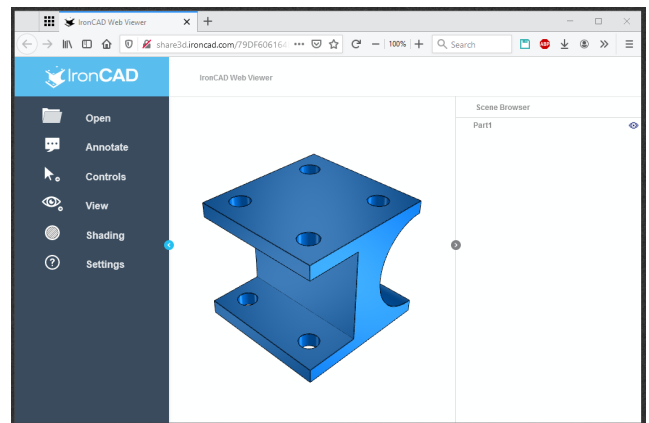

IronWEB Web Publishing

IronWEB™ Publishing allows you to make information about your design available to anyone in your organization who has a web browser and access to the company intranet. People will be able to understand the state of the project, and view each part/assembly and drawings in a 3D viewable format and 2D PDF. Set up a web server pointed to your CAD directories. Set up appropriate security policies for the web server, and then set up the Web Publisher to automatically keep an HTML and Files repository up to- date. The Web Publisher can run automatically at night, updating the web versions of any CAD file that has been changed during the previous day. Or, run it manually whenever you're ready.

Collaboration and Data Sharing (con't)

3D Annotation (Basic PMI)

3D annotation framework is the basis for PMI (Product Manufacturing Information). Leveraging the annotation capabilities of CAXA DRAFT, users will now have the ability to create 3D annotation such as Linear, Angular, and Radial/ Diameter Dimensions, Notes, Geometric Tolerances, Surface Finish, Weld and Datum annotations directly in 3D on desired plane or viewing orientations. All annotations created can be transferred to the CAXA DRAFT's 2D environment for improved speed in annotation when desired.
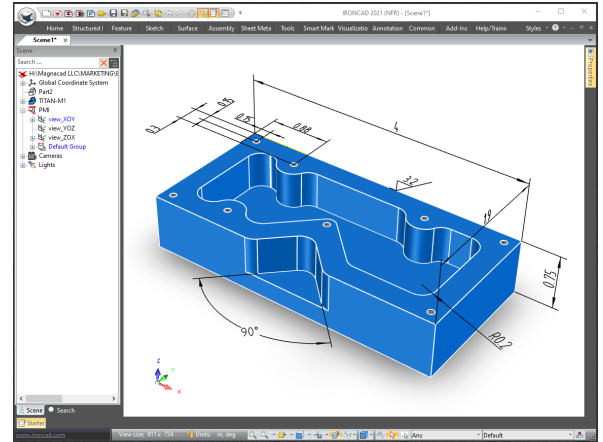
IronCAD-COMPOSE (Sales Configurator)

More than just a 3D CAD viewer, IRONCAD COMPOSE™ is a revolutionary new product empowering users to work share and collaborate with their company's 3D geometry. IRONCAD COMPOSE delivers the ability to manipulate models and assemblies in 3D, Interrogate them, and even make changes to the structure and assembly, quickly, easily and cost effectively.

Using key elements of IRONCAD's powerful modeling capabilities, IRONCAD COMPOSE allows users to import 3D geometry, manipulate and assemble parts and even create measurements and intelligence to control how and where parts may be placed within assemblies. Once users have created an assembly, they can use IRONCAD Compose to present and deliver their concepts with realistic real-time rendering and animations, export as images or as 3D PDF's, or even publish them directly to the web.

Using IRONCAD's unique intuitive User Interface, the COMPOSE product can be mastered in minutes. By adding Design intelligence to parts ensures users can snap together parts easily and more importantly following any predetermined design rules.

We believe that sharing and collaborating with 3D design data is essential in today's fast changing world. Today with IRONCAD COMPOSE, everyone can have real time access to information wherever they are and best of all, it's completely free.

> Import IronCAD files and other industry standard and native CAD files.
> Import Facet formats such as STL, VRML, 3D Studio, AutoCAD 3D DXF, TrueSpace, and Wavefront (OBJ).
> Ability to Assemble/Disassemble Parts and Assemblies.
> Position Parts/Assemblies with Unique TriBall Utility found in IronCAD Solutions.
> Ability to Create Measurements on Imported 3D Data.
> Realistic and Real-time Rendering and Animation Support.
> Export to 3D Facet Formats including 3D PDF for Extended Communication.
> Reuse 3D Data by Using Catalog Drag & Drop.
> Scale Imported Geometry to Fit into Designs.
> Visually Inspect Parts/Assemblies with 3D Visual Tools Such as Hide and Section.

IronCAD-COMPOSE iOS

The IRONCAD COMPOSE iOS application allowing users to view and collaborate designs with your extended teams. Share files and catalogs with the iOS version of COMPOSE and configure your designs on your tablet directly with your customers. Share these new designs directly with the design team to speed up the development process.
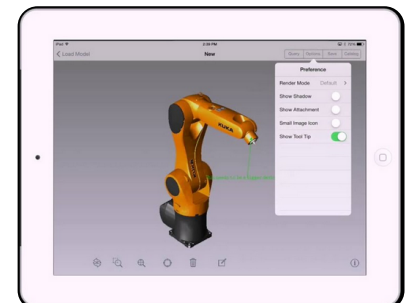
SYNERGY - Cloud Based Collaboration Platform

When it comes to collaboration and file management, IronCAD SYNERGY was made to improve the way we work and design. IronCAD's powerful new collaboration platform creates a newfound synergy between how seamless it is to manage, view, and share all of your files within your organization as well as to external clients and sales teams, all in one place.

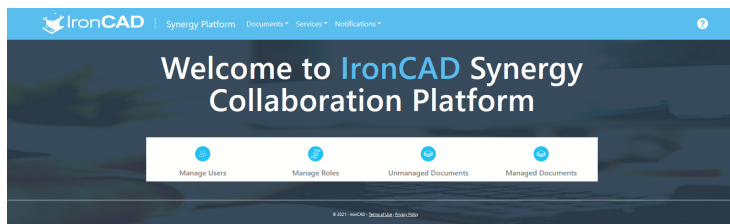## SYNERGY **Vault**
Secure Cloud-Based Data Vault

Users are able to manage, version, and view IronCAD files, as well as manage other file types all within a secure cloud-based vault with up to 10GB of free data storage space per company. Add additional users and data as your usage grows. Control access and manage projects in a single collaboration platform.

SYNERGY **Configurator**
Cloud-Based Configuration

Configure over the cloud to communicate between sales teams, customers, and suppliers to configure products and communicate design concepts and changes. Seamlessly, share configurations with the design team to make edits and to seamlessly convert data to production design to speed up the design -to-production process.

Accessible Anywhere and Dependable File Storage

SYNERGY Vault is built on the Amazon Web Services cloud and accessible anywhere on any device for remote collaboration. It offers up to 10GB of free secure cloud -based data storage for IronCAD Supported Customers where users are able to view, control access, and manage IronCAD files as well as many other types of files. With IronCAD files, all 3D scene external file associations and the associated drawings associations are maintained with SYNERGY Vault for streamlined file management.

Controlled Check In & Check Out Procedure

In regards to file management, security is top priority. SYNERGY Vault is a secure file management tool that offers a guarded way for users to check-in and check-out from their file vault from within IronCAD and from the browser, as well as manage who can access and release files.

Cloud-Based Viewer

Within IronCAD's SYNERGY Vault, users are able to view IronCAD files using a cloud -based viewer that is accessible on any device. Share your designs throughout your team or with customers to extend your collaboration.

Configuration Anywhere Anytime

IronCAD's SYNERGY Configurator allows users to remotely configure 3D Products over the cloud in a browser on any device. Simple Drag & Drop design with intelligent connections makes configuring products a snap. Share configured products with teams and customers to design the right part the first time.

Configure, Price & Collaboration

Inside SYNERGY Configurator, users can easily present pricing information to customers from the configured 3D products. Using SYNERGY Platform, catalogs of your configurable 3D products are uploaded and shared in the configurator. Design products with customers, gather feedback and share the configured products back to the design team to dynamically connect to the real design data to enhance the design-to-production process.

Connect to Design Teams with Real Data

SYNERGY Configurator allows sales teams to securely share and configure 3D Design data in a lightweight format. Once a product is configured, the data can be sent to IronCAD Products to automatically load the real design data in the configured product state allowing design teams to quickly finalize the products, automatically created product drawings, and move the product to production faster than ever before.

2D Drafting and Detailing

IronCAD provides two associative 2D drawing environments to address your drafting and detailing needs. The IronCAD drawing environment provides lightning fast detailing of your 3D designs for quick drawing generation. IronCAD CAXA drafting environment provides fast drafting detailing of your 3D designs for production ready technical drawings. You choose what fits your needs on-demand.

IronCAD Drawing

The IronCAD 2D Drawing environment (.icd) provides simply and easy part detailing associative to the 3D parts/assemblies and is commonly used to generate fast accurate drawings. Many use the "Drawing" environment for all their production detailing needs. It includes a vast array of drawing and drafting tools.

This 2D environment has a similar user interface as many manistream 3D applications

- 2D Bidirectional Drafting/Detailing
  Library of Catalogs
  Shaded Views
  BOM creation
 Geometric Tolerance
  Weld & Finish Symbols
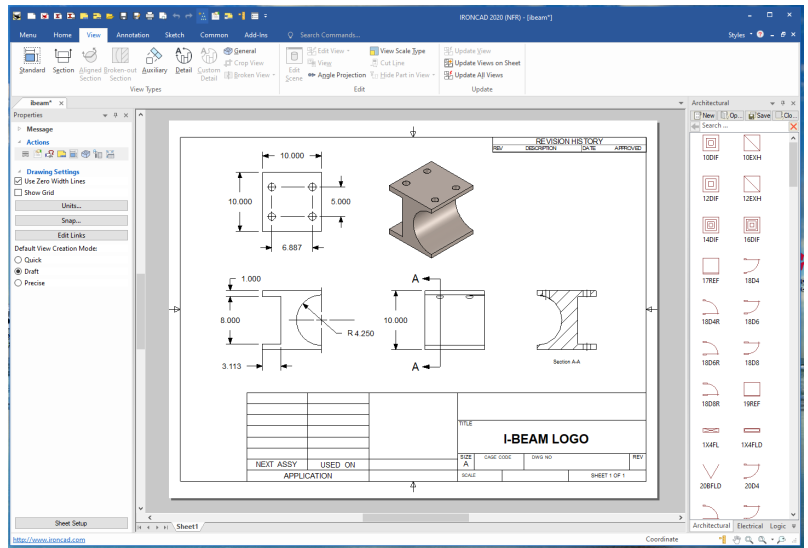
IronCAD Drafting

The IronCAD CaxaDraft 2D Drafting environment in itself is an extremely powerful 2D mechanical drafting tool that can be used as a standalone drafting tool, or in harmony with your IronCAD 3D data. With an easy to learn, industry standard user interface , CaxaDraft enables users to produce production grade 2D documentation.

This 2D environment has a similar user interface as AutoCAD.

- 2D Bidirectional Drafting/Detailing
  Library of Catalogs
  Parametric 2D Parts Library.
  Shaded Views
  BOM creation
  Geometric Tolerance
  Weld and Finish Symbols
  Gear Creation tools

Midwest Bio-Systems Inc
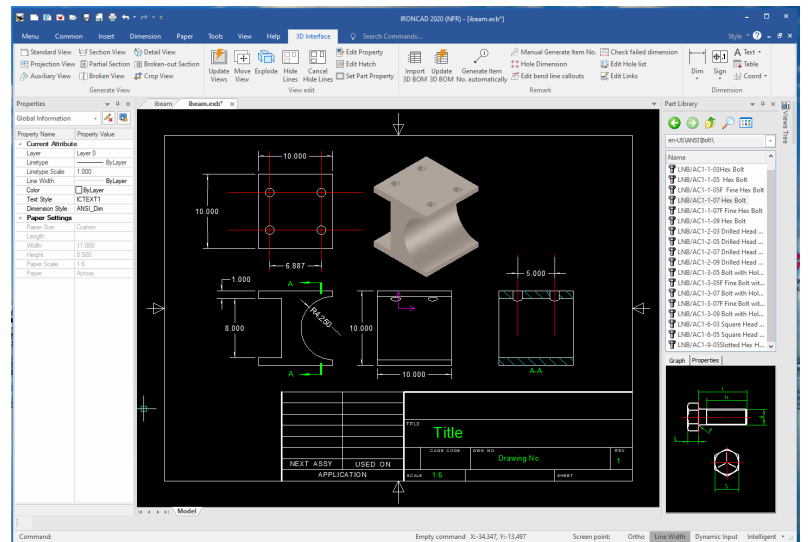
Illinois, USA

Midwest Bio-Systems in Tampico, Illinois in 1993, he had one primary goal: helping Agriculture become healthier and less expensive. Today, MBS's business is global, impacting and improving composting and agricultural fertility programs across the U.S. and world. As of 2010, in the United States alone, there were over ten thousand composters and thousands more service and equipment providers supporting the processing infrastructure.

"Growing with IronCAD"

"Using IronCAD, we were able to build larger machines that have allowed us to be more competitive in that large-scaled compost market," confirms MBS team member Dustin Kropf. "IronCAD has allowed us to design and deliver and the ability to look at our model and make changes to see what works and what doesn't which is a huge benefit. IronCAD is an affordable solution. We would never want to go back to the old way." Dustin continued.

Magnacad is a major supplier of the most innovative and mission critical software for design professionals and enterprises nationwide. We have been involved in the industry over thirty years and have seen a need to provide services and solutions that are a dramatic change to the way organizations maintain their design and engineering infrastructure.

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