

3DLive for CATIA, DELMIA and ENOVIA



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Accelerate Innovation with Online 3D Collaborative Intelligence!

Innovation is the number-one business priority for most CEOs today because it drives revenue and margin growth. Making innovation a reality is not just about designing new products; it's about maximizing your company's intellectual assets to drive innovative thinking, strategic planning, and 'lean' processes every day. How can your organization make sure it achieves these critical goals?

"I work with suppliers every day. Sometimes I'm talking to the project leader, sometimes purchasing, other times it's the CEO. Some days it's all three. We need to be on the same page or we're wasting time and money."

As a result, product recalls are up, quality is down, and margins are slipping. Enterprise stakeholders—from engineering to finance to the shop floor—are drowning in a sea of data, wasting valuable time trying to find, share and reuse the exact contextual information they need to work together and move the project forward. Without it, collaboration is unproductive, decision making is difficult, and 'innovation' is merely a marketing buzz word.

"Our team is so focused on meeting deadlines, we don't have time to innovate. We don't even really collaborate unless it's part of a review."

While on-demand collaboration is critical to keeping pace with market demands, it is too often a fragmented or, at best, a linear process. In spite of advanced tools and technologies, functional silos persist because the information requirements and best practices of departments and disciplines are unique and must be maintained. However, in an overheated environment where millions of dollars may be riding on the collective intelligence of your key people, problems can't wait while they search databases, toggle applications and juggle schedules to make decisions. Clearly, this is not the path to preventing recalls, reducing downtime—or creating the next 'killer category' of products.

"I spend half my time searching databases or trying to navigate product structures so I can collect the data I need to hold meetings with my key partners."

It's a problem in urgent need of a solution, because the ability of your organization to respond quickly and strategically to change may hold the key to success—even survival—in today's marketplace.



So how do you bring these critical-path contributors together to increase the quality and speed of decision making? We know that simply aggregating information is not enough. You must address the 'contextual' challenge by

converging intellectual property (IP) from a maze of sources and disciplines without losing the unique information each person needs to make good decisions. Imagine the business impact of giving users real-time access to the

full range of your enterprise product knowledge—from granular design elements to product lifecycle information (PLM)—in a single, secure collaborative online environment. Well, it's real, it's here, and it's easy—using the universal language of 3D!



3DLive—Bring your IP to Life

3DLive is a lightweight application that introduces a breakthrough 3D paradigm for on-line collaborative intelligence, leveraging your company's unique enterprise 3D and PLM information. 3DLive brings intellectual property (IP) to life in a single, immersive interface that connects the people, processes and products that drive your business.

By combining the universal language of 3D with advanced indexing and search tools, barriers to information sharing and collaboration disappear, and everything from design program updates to supplier meetings to last-minute shop floor changes becomes as fast and easy as surfing the Web.

With just a click of the mouse, you're immersed in a visually rich, real-time environment where you can meet online with 'virtual' teams and communities to search, navigate, chat and collaborate on any aspect of your product-related programs, no matter what the system or source. And 3DLive doesn't care what department or discipline you're in—you create your virtual sessions according to your current business needs.

The ultimate goal of 3DLive is to optimize your company's unique knowledge environment so that people get the contextual information they need to be productive and innovative—no matter what their job, language, or location. Here's how.



3D Search! Download and install...with the 3DLive toolbar in your browser you can find data and projects, query indexed databases, and check for dependencies and impacts in minutes instead of hours.

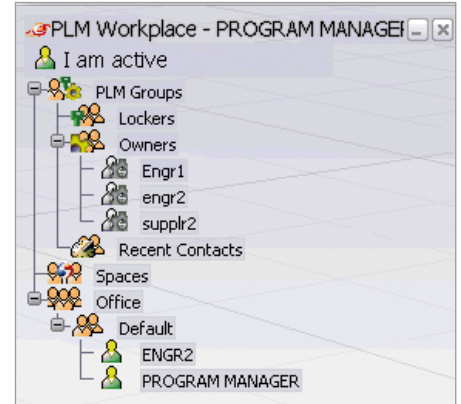
Bring Engineering and the Enterprise Together with 3DLive!

3DLive—the new paradigm for online collaboration—provides a real-time, immersive PLM environment where stakeholders can search, navigate, work and collaborate on any or all aspects of your PLM programs, no matter what the system or source.

3DLive Key Business Benefits:

- *Effortlessly connect all knowledge stakeholders to enterprise IP and to each other.*
- *Accelerate product searches while ensuring accurate and up-to-date results*
- *Quickly navigate, browse and intuitively access the full product definition*
- *Easy to use, highly efficient and in-context real-time collaboration*

The combination of 3DLive and IBM Lotus Sametime provide a unique solution for industry by promoting the sharing of data and ideas that can result in a faster time to market and an increase in overall product innovation. 3DLive supports IBM Lotus Sametime and its broad set of advanced real time collaboration capabilities.



3D Contextual Buddy List provides role-based access to current information, connecting you with all the people related to your context or project.

3DLive facilitates the collaboration between the different people who need to leverage intellectual property in decision making processes. Users have the ability to get connected, at anytime, with the people relevant to their work-context. By simply clicking on a part, users are instantly aware if the part's owner is online or not and they can easily start a real-time chat session with those owners that are online. When discussing the product with other online participants, users can start a dynamic 3D sharing and co-navigation with the 3DHeads-up capabilities to share what they see and explain what they mean.



3D Compass guides you through your 3D PLM universe, easily controlling what you see and where you go with a simple mouse click.

3DLive Connectors

3DLive is a lightweight application that can leverage your current PDM or PLM system, and any combination of Dassault Systèmes PLM products to maximize the return on your corporate IP investment. To maximize flexibility, 3DLive leverages Dassault Systèmes' adaptive Service-Oriented Architecture to ensure smooth integration and deliver rich functionality and information when and where it's needed.

3DLive utilizes out-of-the box Live Connector products to access context-rich PLM data sources. Providing direct access to PLM information in ENOVIA repositories, 3DLive effortlessly connects engineering, manufacturing and enterprise knowledge stakeholders, suppliers, and managers to information and to each other, accelerating problem resolution while improving downstream planning and resource management. The Live Connectors make searching PLM product and program status information faster and easier across all lifecycle phases, providing actionable results that stakeholders can use—with no waiting or costly downtime.

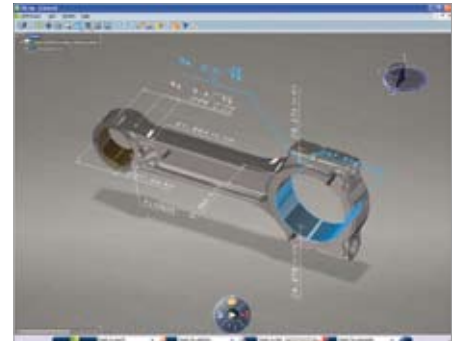
ENOVIA Live Connectors enable secure, scalable connections to ENOVIA MatrixOne, ENOVIA SmarTeam and ENOVIA VPLM V5 VPM and ENOVIAVPM data sources from 3DLive for ENOVIA.

Live Applications

3DLive includes a portfolio of secure Live Applications for specialized PLM functions and processes. Included in the portfolio of Live Application products are solutions that provide: advanced collaboration capabilities for design reviews and the use of Functional Tolerancing and Annotation data associated with the 3D product model.

CATIA—Live Functional Tolerancing and Annotation (FT&A) Review—

enhances understanding and improves decision making by providing early and direct insight into dimensioning and tolerancing annotations, geometrical elements and features, and the relationships between elements. The CATIA—Live FT&A Review application displays the FT&A annotations and gives users the ability to query or filter the annotations according to their requirements so they can quickly find and leverage specific 3D product model data. Available with any 3DLive configuration (CATIA—3DLive or ENOVIA—3DLive), CATIA—Live Functional Tolerancing and Annotation Review eliminates the need for 2D drawings, increasing both the speed and quality of processes outside of engineering that require 3D information but do not use CAD authoring tools.



CATIA—Live : Review

CATIA—Live FT&A Review:

- *Provides direct access to tolerancing and annotation information associated with the 3D product model.*
- *Provides accurate and easy search and filtering capabilities directly on FT&A data.*
- *Provides rapid identification of all FT&A information, improving the quality and speed of downstream data and processes.*

ENOVIA—Live Collaborative Review

adds robust collaborative review capabilities to the powerful search, visualize and navigate paradigm delivered in 3DLive. Providing out-of-the box support for CATIA—3DLive, the Live Collaborative Review solution increases your business agility by supporting design reviews anytime, anywhere people need specific product information to make decisions and drive downstream activities.



3D Heads-up enables dynamic chat, 3D image-sharing, co-navigation, and annotation!

ENOVIA—Live Collaborative Review—delivers annotated views, 3D measurements, and 3D cross sections for collaborative studies and presentations. ENOVIA—Live Collaborative Review facilitates collaboration among all team members involved in reviews and inspections, shedding real-time insight on criteria impacting decisions—helping teams

across your development enterprise make better decisions faster, improving both top- and bottom line revenues. It also delivers annotated views, 3D measurements, and 3D cross sections to collaborative studies and presentations that require precise 3D information in addition to the easy, intuitive navigation, examination and collaboration available in the base 3DLive configurations for CATIA and ENOVIA.

But what about innovation—the most elusive business goal of all? From day one, 3DLive will place your key people in the driver's seat of a virtual 'what if' machine! How? It is the only collaborative environment where technical and non-technical stakeholders can find everything they need to generate, share and capitalize on innovative ideas, solutions, and products in an on-demand 24/7 world. 3DLive provides a 'virtual window' into the workings of your product development enterprise, guiding key contributors to the exact projects, people, and data they need with just a few clicks of the mouse. Using 3DLive, the quality and speed of decision making will accelerate dramatically, saving time and money, and taking your organization to the next level of performance! That's the power of collaborative intelligence!

CEO's Take Notice!

Don't confuse 3DLive with traditional dashboards, workspaces or document-based portals. While they can be accessed through 3DLive, it provides much more value to your key people and your business. Now that you've 'taken the tour', you can see that 3DLive provides a 'virtual window' into the workings of your product development enterprise, guiding key contributors to the exact projects, people, and data they need with just a few clicks of the mouse. Using 3DLive, the quality and speed of decision making will accelerate dramatically, saving time and money, while taking your organization to the next level of performance!

DELMIA—3DLive Configuration (LID)

- *Provides easy 3D navigation of Product, Manufacturing Processes and Manufacturing Resources data.*
- *Enables real-time collaboration within extended teams.*

DELMIA—3DLive enables searching and navigation of Product, Process, and Resource (PPR) information stored in ENOVIA Manufacturing Hub regardless of location for on demand, real-time 3D collaboration.



DELMIA—3DLive displays the manufacturing resources and work stations stored in the Manufacturing Hub in 3D.

DELMIA—3DLive provides all the product lifecycle information required to understand, collaborate and make decisions in today's globally distributed environment within a single environment. DELMIA—3DLive turns product, process and resource (PPR) data into business intelligence, enabling on demand 3D collaboration while leveraging a unique user experience that combines simple and intuitive navigation with rapid and efficient search capabilities so users across the enterprise can leverage PLM information to drive the business forward.

The DELMIA—3DLive configuration provides a single environment of all the PLM information required to understand, collaborate and make decisions in

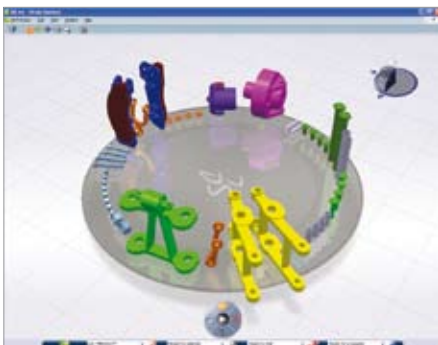
today's spread-out organizations, dealing with more complex products and silos of information. DELMIA—3DLive configuration leverages PLM data into business intelligence, enabling on demand 3D collaboration while offering a unique user experience based on an efficient search of PLM information and navigation simplicity.

Services based on the V5 Services Oriented Architecture provides DELMIA—3DLive users with access to any kind of PLM sources (including ENOVIA Manufacturing Hub and 3D XML files) while leveraging advanced collaboration scenarios between all stakeholders.

This configuration also enables administrators to create and define the settings of DELMIA—3DLive for end users through DSN extensions available with the LID Configuration.

DELMIA—Live Shopfloor Review Product (LSF)

- *Provides up-to-date process information and work instructions for the shop floor.*
- *Provides efficient and easy 3D navigation of work instructions, processes, and smooth or step-based animations of simulation.*
- *Provides easy identification of all related Products, FTA, and resources for a particular manufacturing process selected in the tree or item selected in the 3D view through Cross Highlighting.*



DELMIA—Live Shopfloor Review Product (LSF)

Enables shop floor users to search, navigate on product, process, and resource information, view work instructions and smooth or step-based animations of simulation as well as view related products, processes, and resources in the 3DXML document authored in DELMIA DPM Work Instructions. DELMIA—Live Shopfloor Review enables the shop floor personnel to view the 3D process and associated work instructions to enable operator training and production execution. DELMIA—Live Shopfloor Review delivers current, accurate work instructions based on actual PPR data stored in the 3DXML document and allows shop floor users to view 3D work instructions in conjunction with 3D simulation animations.

Users may interactively step through a process and jump to different states in the 3D display to view related work instructions in an immersive text window or related simulation animations. Users may also select a process and all related products, FTA, and resources for the associated items are highlighted using cross highlighting allowing the user to locate all required items for a job.

DELMIA—Live Shopfloor Review fills the need for comprehensive access to manufacturing process planning and engineering product information and work instruction by shop floor workers minimizing the amount of guess work and number of errors caused by ambiguous instructions or out-of-date product data, thus ensuring the highest level of productivity on the shop floor.

DELMIA—Live PPR Navigator & Connector Product (LMH)

- *Navigate easily in 3D.*
- *Provides quick and easy navigation of Product, Manufacturing Process and Manufacturing Resources data.*
- *Search and load from multiple DELMIA Manufacturing Hub projects.*

The DELMIA—Live PPR Navigator & Connector product (LMH) can be used in conjunction with the ENOVIA—3DLive Configuration (LIV) so that a user can access data stored in both the ENOVIA Engineering & DELMIA Manufacturing Hubs.

Enables search and navigation on PPR information stored in ENOVIA Manufacturing Hub regardless of location for on demand, real-time 3D collaboration.

DELMIA—Live PPR Navigator & Connector (LMH) makes searching ENOVIA Manufacturing Hub information faster and improves the relevancy of the results so that users can spend their time innovating not waiting. The DELMIA—Live PPR Navigator & Connector provides direct access to the process and digital manufacturing information in DELMIA V5 connecting all the enterprise and its manufacturing process knowledge. With the DELMIA—Live PPR Navigator & Connector Product 3DLive users can rapidly search and intuitively navigate indexed ENOVIA Manufacturing Hub data.

DELMIA—Live PPR Navigator & Connector (LMH) enables navigation of indexed data within DELMIA data sources

The products and resources available in ENOVIA Manufacturing Hub are represented by their 3D image, so the user can identify them by their shape and navigate in 3D instead of browsing lists and trees. The user can easily recognize the relations between the processes and the products and resources. The user can choose to start navigation with a product and view the related resources, or start with resources or a process and view the related parts and resources.

This allows the user to view the 3D data in the manufacturing context—connecting the enterprise to the manufacturing process information, facilitating discovery and collaboration and putting 3D information at the fingertips of every stakeholder. At any point in time a stakeholder can start collaborating with the owner of a product, process, or resource, or with any other 3DLive user. It is possible to chat, exchange snapshots, and even co-review while having both users viewing with the same viewpoint.

Choose IBM—the PLM leader

IBM's PLM expertise and leadership continues to be valued by our clients. Today, we are so much more than a PLM application software vendor. We have expanded our scope to include the integration capabilities that organizations need to manage the complexities of the entire value chain.

IBM is the only company that can deliver the complete PLM solution. Our unmatched combination of consulting, applications, middleware, hardware and services, coupled with a broad knowledge of industries and IT solutions, equips us to build complete PLM solutions to fit every business—large and small. This is the IBM difference.

When you choose IBM as your PLM partner, you are choosing:

A PLM leader

IBM leads the development of PLM. Our value proposition is built on a foundation of decades of world-class IBM technology expertise, supported by thousands of IBM engineers and developers in 40 different countries and eight US national medals of technology. This expertise is valued across the globe, and has enabled us to develop links with business partners that continue to evolve and improve the value we can add for our clients.

An unrivalled commitment

Our unmatched annual investment in Research & Development—the key to innovation—stands at approximately \$5.5 billion. This is testament to our commitment to helping your organization succeed in a world of change. In 2006, IBM innovators contributed to 3,261 patents awarded to IBM—an average of 10 patents a day. United States Patent and Trademark Office statistics show that IBM has generated more patents than any other company for 14 consecutive years.

A world-class manufacturer

IBM possesses deep industry experience and knowledge of the challenges you face. As a primary user of PLM, we understand your business processes and have the support of a global team of engineers to help tackle your real world issues—and keep you ahead of your competition.

Breadth of offerings

We can impartially recommend PLM offerings to suit your organization, and employ and integrate the solution with your extended enterprise.

For more information

Please visit the IBM PLM website at:
ibm.com/solutions/plm





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