Visual Product Catalog 2.01

THE RIGHT HEMISPHERE VISUAL PRODUCT CATALOG APPLICATION SPEEDS E-COMMERCE FOR THE VISUAL ENTERPRISE.

Focuses on the speed, ease of use and quality of New Product or Aftermarket order management for replacement, spare and OEM sales.

Facts & Figures

Overview

Manufacturers and aftermarket divisions face increasingly complex products to manufacture, support and service. The complexity of a company's product line is further complicated by the customization afforded by flexible design and manufacturing processes. These processes allow customers to receive highly differentiated products that serve their needs well. Manufacturers though can struggle under the weight of service and aftermarket configuration and product complexity.

Original Equipment Manufacturers (OEMs) have challenges in low inventory turn when they have thousands and millions of SKUs. This can lead to low margin resales, inefficient customer sales operations and low customer loyalty. Customer loyalty is also affected by competition that competes with the OEM at the low end and by OEM order systems that do not present valuable and distinguishing product information at the time of sale.

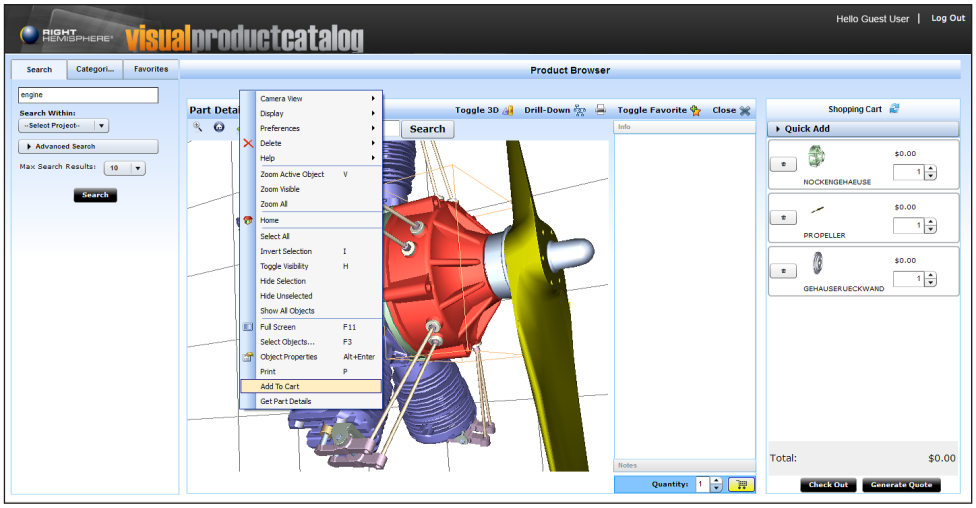
Manufacturers can be challenged by the need to go global, operate over the Internet and run 24 x 7. These challenges cause increasingly burdensome requirements of language translation, multi-shift customer services operations and Internet e-commerce infrastructure.

The inefficiency of existing bureaucratic order workflow and their paper-based infrastructure can literally impede the ability to operate globally.

Manufacturers and aftermarket divisions need help simplifying and streamlining the ability to support their customer base.

Manufacturers with aftermarket divisions have continuous improvement projects responsible for capitalizing on inter-business unit synergies, eliminating part replicator competitors, and establishing a revenue growth cycle of at least 20%. Manufacturers expect growth from current market needs but also intend to establish systems and technologies to further aftermarket penetration, strengthen its competitive position and increase competitive wins. Typical initiatives include excellence in Front End Process execution, Supply Chain throughput and Aftermarket Superiority. The Visual Product Catalog (VPC) solution is a key part of Front End Process improvement and Aftermarket Superiority goals.

RH can equip manufacturers with a smarter, Visual Product Catalog (VPC) that ties into their business systems and lets their customers avoid complexity by purchasing the right products and parts using a visual model of what they bought – their system, solution, vehicle or product.



Easily navigate entire product hierarchies and order parts directly from the version you own. Just search, select, buy and checkout.

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VISUAL PRODUCT CATALOG ALLOWS USERS TO ORDER VISUALLY, NATURALLY, AS THEY SEE THE PRODUCT IN REAL LIFE.

01 >> Visual One Click 3D allows customers to order 'as fast as humanly possible' by seeing the part instead of remembering part numbers.

02 >> 3D visualization allows customers to order visually.

03 >> Existing 2D visualization is reused allowing for a transition into 3D. 3D can be put on top of 2D further enabling a transition.

04 >> Zoom feature allows you to identify parts without having to look at hard to read 2D drawings.

05 >> Users can search on part number, serial number, common name or any other metadata that is stored in your business system.

06 >> Users can drill down through category searches of your product catalog.

Facts & Figures

Increase after market service, sales and quality

Many companies are limited in their ability to grow their aftermarket because they lack an ecommerce strategy, present only books to the web, or are hindered by overbearing manual sales operations. For example, manufacturers of highly customizable products produce millions of small lot products customized for special duty at their customers. This variability creates an efficiency problem; the inability to publish product and parts books will millions of stock keeping units (SKUs), the inability to author and store millions of images of SKUs, and the inability of customers to wade through millions of SKUs to find what they need. On the other hand, manufacturers of highly complex products have an inability to present its tens of thousands of parts to a customer in an efficient manner to allow the customer to match up what they need to what they own to find and select the right product.

By reusing the CAD data of the millions of small lot products, Deep Server and the VPC present an online, visual interface to allow customers to search for what they specifically own, typically by serial number, part number and revision or other product characteristics particular to their solution.

The 3D visual interface allows customers to match up the product in real life to what they see in the VPC interface. The CAD data of highly complex products is reused to allow customers to visually navigate complex structures naturally in 3D or in 2D. By navigating through a complex product as it is seen in real life, the visual context allows the customer to find and select the right product.

The visual interface naturally replaces multilingual translation problems since searching and selection are done visually. Customers can select the right part the first time. Aftermarket quality is greatly improved by virtually eliminating order mistakes and returned merchandise due to shipping the wrong part to a customer.

The VPC enables growth in a manufacturer's aftermarket business without additional personnel, without translation of multi-volume parts books for multiple languages, and by enabling a 24 x 7 online presence. The VPC increases sales and customer loyalty since customer service representatives, value added resellers, customers, and distributors find your products faster and easier with more precision.

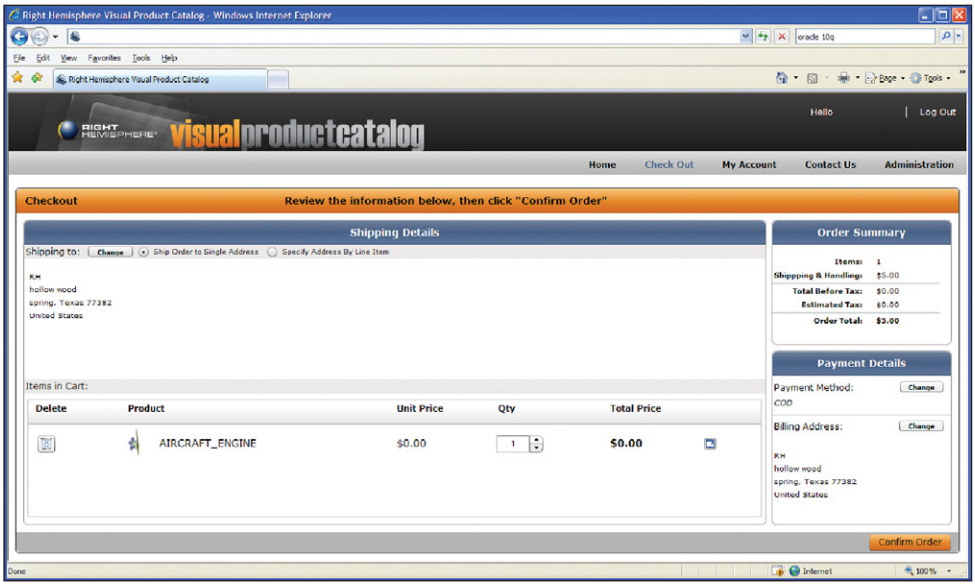
Operate and Collaborate over the Internet

Customers and customer service agents often discuss what to order together over the phone. The Visual Parts Catalog now allows for multiple ways for the two people to collaborate visually, to enable them to ensure they are both looking at the same product, the same part. Now both the customer and the agent can search for the same entity at the same time, ensuring that both are talking about the exact same object. The customer service agent can be enabled to put a product or part into the customer's shopping cart so the customer can then review the shopping cart to see if it's the right part. Online, real time collaboration enables the customer to find and select the right product.

Internet ready, perfect for aftermarket, 24/7 sales

The Visual Product Catalog is a web based, Flex based, Rich Internet Application. It is Service Oriented Architecture (SOA) aware, allowing it to connect to RH's Deep Server and a variety of business applications for use in automating the order process. Connections to sales order systems (e.g. Siebel), ERP for inventory and pricing (e.g. SAP), warehousing systems for shipment or online systems at FedEx™ or UPS™ allow for data exchange to occur and reduce or eliminate order processing errors. The VPC application is an online flash based application that runs in a user's browser. It is ultimately scalable since it does not depend on the web server to generate its screens. This architecture means less down time, high availability, high mean time to repair and is therefore conducive to 24/7 operations on a global level.

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The customizable flex application runs in a browser.

Search, Select, Buy, Checkout

The Visual Product Catalog follows the standard online ecommerce workflow, Search, Select, Buy and Checkout. The interface allows searching on the left, the center contains the results and product browsing area and the right is the shopping cart.

- **Search**
  - 3D visualization allows customers to order visually – no more frustrated customers searching for part numbers and looking at hard to read 2D drawings
  - Users can search on part number, serial number, common name or any other metadata that is stored in your business system
  - Zoom feature allows for aging population to identify parts without having to look at hard to read 2D drawings
  - Kits are presented in their entirety while allowing for fast ordering
  - Users can drill down through category searches of your product catalog
  - Search by categories stored in server
  - Search within 3D
  - Customizable advanced search form

- **Select**
  - One Click Purchasing provides fastest search, select, buy possible right from 3D visual view of products
  - User favorites
  - "Customers Also Purchased" items box similar to Amazon and other sites showing what other products were purchased with the selection
  - Automatic creation of "additional product camera views"
  - Customizable display of specific metadata
  - Live filtering of search results based on specific metadata

- **Buy**
  - Drag and Drop purchasing onto Shopping Cart
  - One-Click reorder of previous orders
  - User shopping cart items remain in cart from session to session until removed or until checkout
  - Promotions—discounts for specific users or for bulk orders

- **Checkout**
  - One Click Purchasing provides fastest search, select, buy possible right from 3D visual view of products
  - One-page checkout
  - Allows for electronic download of free or paid digital products
  - Ship to multiple addresses
  - Create copies of items in cart at checkout to ship to different address
  - Generate order confirmation PDF
  - Generate quote PDF
  - Email order confirmation

- **Administration**
  - User "My Account" management to view order history, create personal address book, and download digital products

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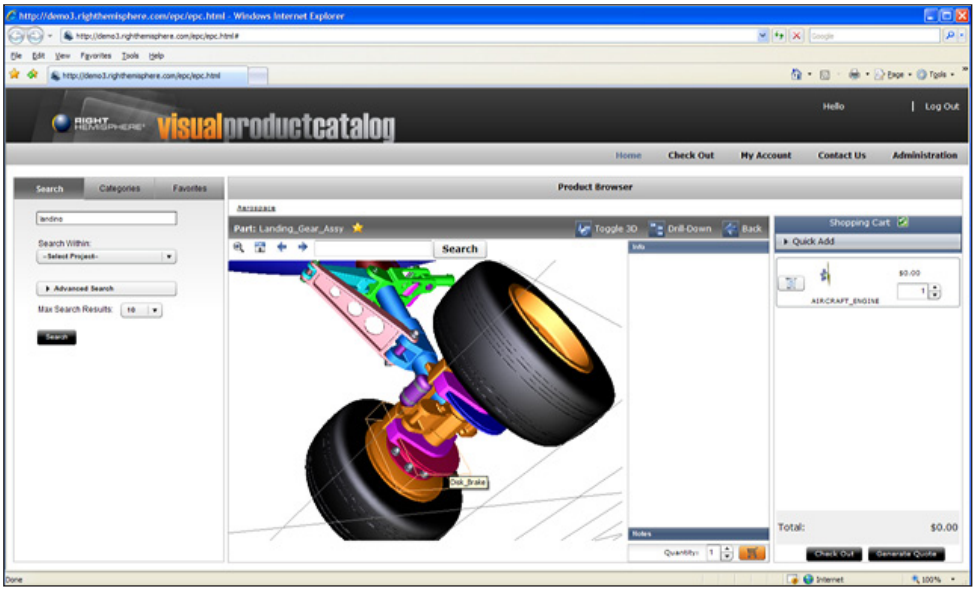
Reuse existing customer based CAD / business data

The RH Architecture removes the labor costs for producing electronic or web-based product and part catalogs. Current paper based product books require customer labor to create point and click associations between the 2D visual part image (drawings) identified by CGM hotspots and the bill of material. When the source of the part design is 3D CAD, this is at best a very inefficient use of computing and human resources – the 3D CAD data structure already contains the association between 'image'/ geometry and its part number.

VPC solutions often require the population of a self contained parts database, often with advertised size limits (around 1 million parts in the whole database). The server side of the VPC, Deep Server, is your parts database. There is no need to create a new database.

Since Deep Server can be integrated to your PLM and ERP systems, PLM change management updates the VPC 3D models if needed and the ERP linkage provides accurate pricing and order processing.

Reuse of the existing CAD data structured according to the service bill of material (BOM) from an ERP system allows Deep Server to automatically render Service BOM 3D models and other graphics.



Reuse existing CAD data.

No 'assembly by hand' parts catalog books, diagrams

All existing part/ product catalog systems require their customers to create 2D hot spotted CGM format files to simulate the touch and purchase activity. This is regardless of whether the source data is in 2d or 3D – when starting with a 3D CAD data source, this is a waste of resources.

The RH VPC can use 2D CGM files as part of a migration path to eventually discontinue hotspotting workflows. In addition, for those that only have 2D drawings, the Deep Server system can automatically generate CGM format files that are then used in our hotspotting authoring process using Deep Exploration.

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SO THERE YOU HAVE IT! VISUAL PRODUCT CATALOG 2.01:

01 >> One Click Purchasing provides fastest search, select, buy possible right from 3D visual view of products

02 >> Elegant simplicity in the User Interface without giving up valuable functionality and capability

03 >> The ability to review and search any model and author end deliverables from that model suited to the user needs, formats and processes in functional areas across the enterprise.

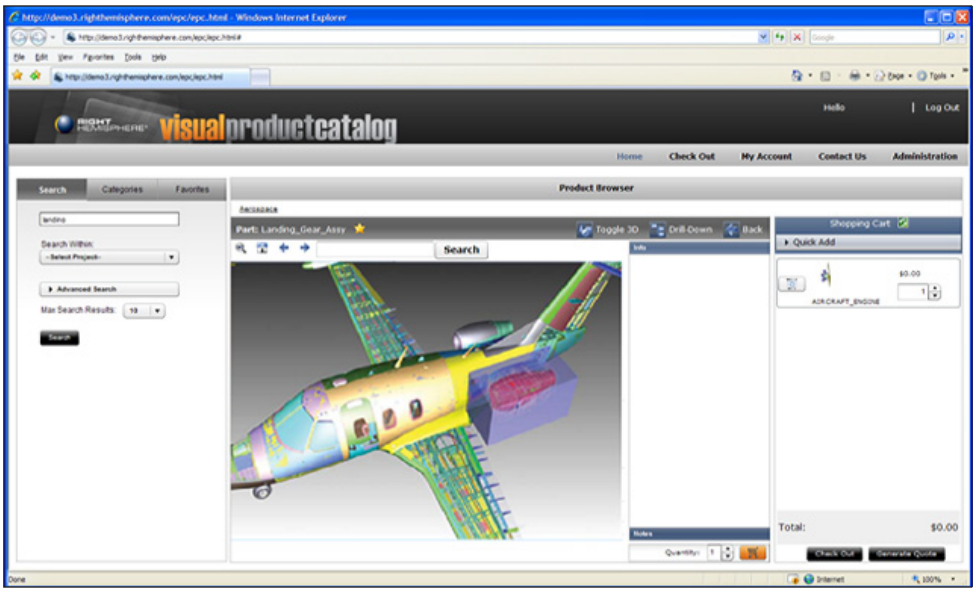
04 >> What more could you ask for?

Facts & Figures

Massive Model Visualization and Search

Visual Product Catalog 6 has redefined the way in which large, complex products can be searched and queried.

Now, products of any size can be viewed by users in real-time bringing in all details as users pan, zoom and navigate the product.

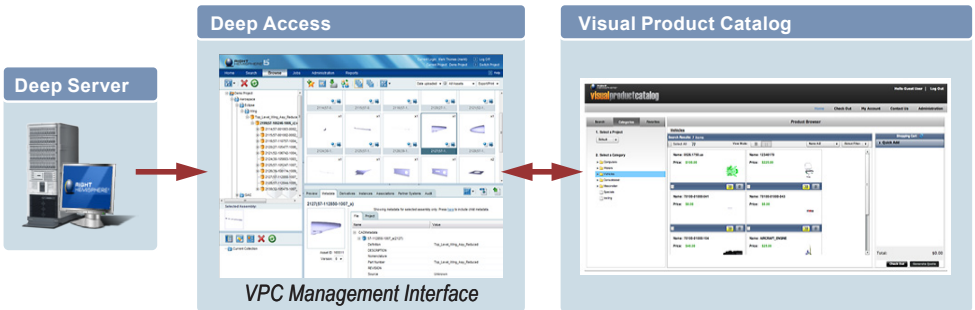


Visually search and select within large products.

Automated server solution supports the Visual Product Catalog

The RH Deep Server automates the population of the product database. The product database consists of the 3D geometry or 2D hotspotted images of various manufactured product. The geometry or images are structured and stored with its associated part number, part/ assembly hierarchy and business metadata. The geometry and images come from an export or integration to the your Product Lifecycle Management (PLM) system where your design data is stored. The bill of material (BOM) structure exported from the PLM system is used as the key to export business data from your manufacturing or enterprise planning system(s) (MRP and ERP). Any BOM structure can be reused, service, sales BOM and so on. The export or integration to your ERPs systems allow for batch or real time access to inventory, pricing and shipment data and operations as well as the order processing interface to allow VPC orders to be sent and executed upon.

By reusing 3D CAD, there is no human labor therefore to setup an online product catalog other than system configuration and data management. There needs to be no authoring of product catalog content.



Create photorealistic images and video directly from 3D CAD data to avoid costly prototypes and photo shoots.

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ABOUT RIGHT HEMISPHERE

01 >> Right Hemisphere is the industry standard for the Visual Enterprise that enables manufacturers to optimize their global product development, launch, and support processes.

02 >> Organizations have invested in operational processes and IT systems to improve product lifecycle efficiencies, yet delivery of precise and up-to-date product information to the extended enterprise in a timely, efficient and usable form is difficult today. Right Hemisphere maximizes knowledge transfer efficiency of product information to downstream stakeholders by automatically publishing product information readily available in CAD, PLM, and ERP systems into common document formats and business applications

03 >> Leading manufacturers rely on Right Hemisphere to dramatically accelerate time to market, increase product and services revenues, and lower product development, manufacturing and service costs.

04 >> Learn more about Right Hemisphere at www.righthemisphere.com

Facts & Figures

When using 2D CGM hotspotted files, Deep Server serves as the image repository, product catalog, online ordering interface and ecommerce front end to your existing business systems.

Other automation and server operational benefits include:

- Our product catalog solution has no “per page” fees for publishing
- Use Deep Server as a standalone product catalog server or integrated into your business systems
- Grow aftermarket business without additional personnel
- Reuse existing customer based CAD (CATIA, Pro/E, Solidworks, UGNX, etc.) and/ business data
- VPC can also reuse existing 2D CGM hotspotted files to support and promote maturing from 2D to 3D data
- Upload hotspotted 2D graphics authored in Deep Exploration into Deep Server via Deep Access to automatically populate online product catalog
- No limit to the amount of catalog items that can be handled
- Real-time price query -- data and system integration allows for electronic data exchange with internal business systems such as SAP, JDE, Oracle
- XML integration allows any bill of material (BOM) to be used for the visual model of products, service, manufacturing, sales BOMs
- Built in Internet shopping cart platform alleviates the need to create your own – just interface to existing order systems
- Interface to engineering, procurement and sales systems for customer specific ordering, purchasing and shipping
- Interface to electronic shippers (e.g. Fedex, UPS) for hands off shipping and logistics

A Clear Picture with Automated Rendering

Imagine the ability of Deep Server to render visually rich and realistic product images automatically for the Visual Product Catalog with powerful rendering technology built right in! Now every technical document, every assembly or maintenance procedure, every marketing and product sales image can be generated by the server with amazing photorealistic quality from each CAD model. No matter what purpose, whether it be a marketing brochure, advertisement, assembly instruction or repair procedure, everyone will benefit from the clarity of the images.

Visual Product Catalog System Requirements

Supported Operating Systems

- WindowsXP sp3 (32 and 64)
- Vista (32 and 64)
- Windows 7 (32 and 64

Recommended Operating System

- Windows 7 (32 and 64)

Client Additional

- Adobe Flash player 10
- MS Internet Explorer 7 is recommended
- To view 3D content in the VPC, Deep View 6.x must be installed
- An Internet or company internal (VPN) network connection is required for VPC use

Minimum Client Hardware Configuration

- Pentium 4 1Ghz processor or higher
- 512MB of RAM (more for large model and texture sizes)
- Graphics card, with the latest drivers, capable of displaying 24-bit color

Recommended Client Hardware Configuration

- Pentium 4, 2Ghz processor or higher
- 3GB of RAM (more for large model and texture sizes)
- Graphics card with the latest drivers, 128MB of RAM, and support for DirectX or OpenGL

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