Creo Networked Graphic Production: Enabling Integration of Digital Printing with Graphic Arts

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Table of Content - Executive Summary

Networked Graphic Production (NGP) is a vision—a development initiative—an environment—and it's in real products that are used by Creo customers today.

Networked Graphic Production is a revolution in interconnectivity. It links creative and production systems, management information systems (MIS), content management, internet systems and more. With Networked Graphic Production, duplication between systems can be reduced, systems can be optimized, and the many people involved in print projects can communicate and collaborate—from idea to delivery—as never before.

Networked Graphic Production is the Creo vision for streamlining and automating every step in the production process—and creating a collaborative environment for printers, print buyers and creative professionals. Creo shares this vision with leading printing industry partners, to ensure that each vendor's solution adds value, and enhances the benefits received by Creo customers.

Networked Graphic Production is not a closed, single vendor solution. Open standards and flexible infrastructure are essential to create an interconnected network that leads to the next generation of automated "smart systems".
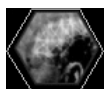
In our products, Creo uses open industry standards, including JDF, PDF/X, and XML. These allow the broadest accessibility to third-party solutions, and ensure compatibility with the widest selection of products. Only with standard protocols that 'speak the same languages', can systems connect, communicate, and meaningfully view, or interact with, production processes.

The solutions that comprise Networked Graphic Production are modular, so customers can develop their Networked Graphic Production environment piece by piece, only investing in the products that suit their needs.

Thanks to open standards, Creo products can plug-and-play in many configurations. Printers can extend the benefit from their current investments while they build a solution that suits their business needs today. They have the assurance that they will be able to scale up, in a modular fashion, in the future.

The Synapse Product Suite

Creo's Network Graphic Production is based on five Components, called the **Synapse Product Suite**. Synapse's aim is to provide a flexible digital interface between the printer and the customer, from end to end. Synapse components are optional, can be deployed either together or individually to augment the productivity of the digital prepress and print production environment, both offset and digital print.

Synapse Prepare creates prepress-ready files within the familiar desktop environment of the creative professional. This product effectively links creative professionals with the print production processes, by providing tools that facilitate the creation of PDF input files built and verified to the printers unique specifications. **Spire** Color Servers will provide a set of predefined directives that insure pre-flight and built to the printers exact specifications so that the files sail right through prepress.

Synapse InSite is an internet portal into prepress for secure job submission, remote proofing and collaboration, job status tracking, and change request management using a standard internet browser. Synapse InSite is the evolution of Creo InSite technology, and allows you to use the internet to strengthen your communications with your customers.
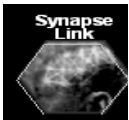

Synapse Director optimizes productivity by providing a central monitoring and management tool for all the workflow servers handling the work in the plant. All processing is captured in a system wide database, that ensures the data collection power you need to identify and address specific system bottlenecks, can accurately bill for work carried out, and are aware of the status of every piece of work in your plant. **Spire Color Servers,**

as one of the workflow systems of Creo, will be seamlessly connected to Synapse Director, allowing the customer to integrate offset printing with digital printing.

Synapse Content manages job data and page elements, and provides the ability to offer asset management services to your customers and tools for personalized marketing.

Content application will provide Spire with an API that enables Search, Register, Archive, and Submit

Synapse Link provides integration between printers' management system, i.e. their Enterprise Resource Planning (ERP) systems and the production system, i.e. the pre-press and press operations. Synapse Link eliminates the need for long, manual and error-prone updates between the two systems, and provides much better tools for analyzing and optimizing the printer's operations.

Customers who purchase solutions from Networked Graphic Production-enabled partners are assured that their technology investment has been pre-qualified as a key building block to a completely integrated production

or manufacturing environment. It also ensures a guaranteed printing environment with both immediate and long-term ROI; providing both significant cost-savings and business efficiencies through seamless integration and end-to-end automation while providing a long-term roadmap for even further efficiencies such as open file standards. Open file standards such as **JDF and PDF are key elements for extending the value of Networked Graphic Production.**
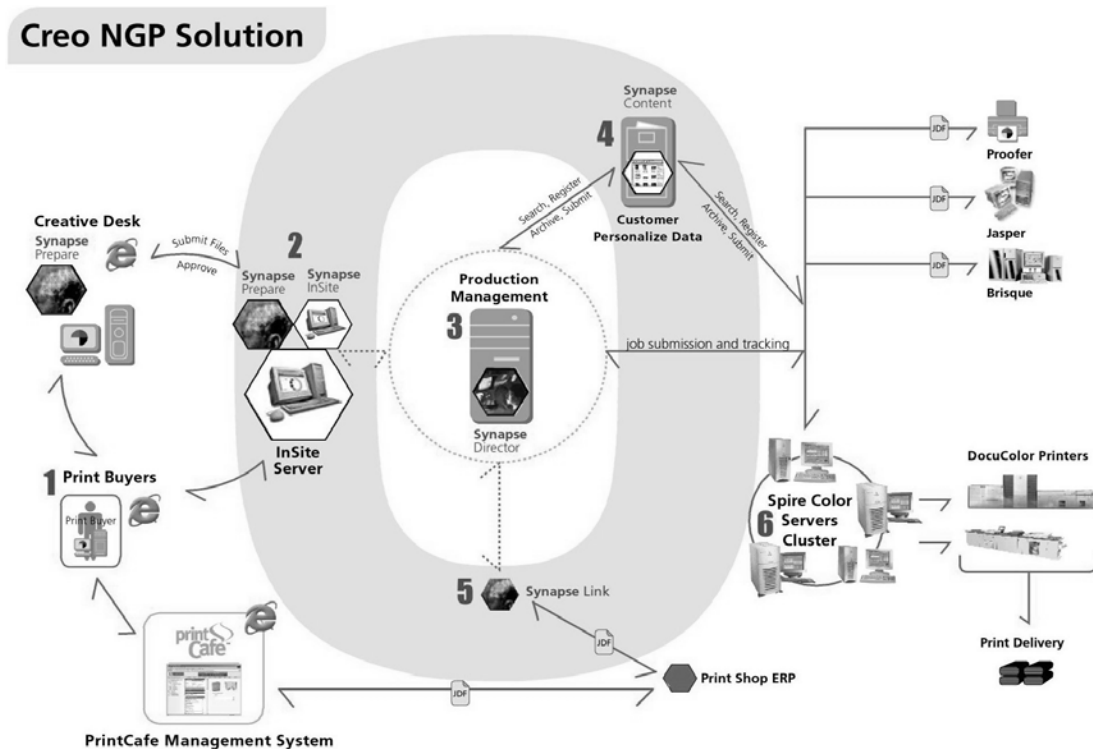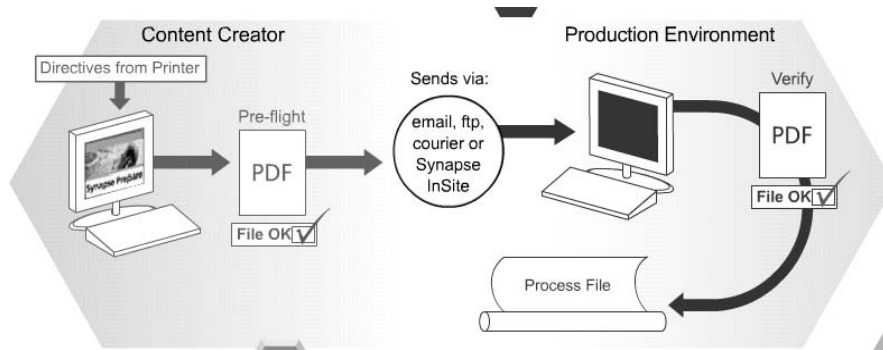
How Does It Actually Work?

"Creo NGP Solution" chart shows the job life cycle in a pre-press, graphic arts environment. Following the job in its various life stages demonstrates the great value of Networked Graphic Production. It also shows the role that each of the Synapse products fulfill and how **Spire** Color Servers act as an integrated part of the NGP Solution.

1 File Preparation

The **Synapse Prepare** software system is used to prepare files on the creative desktop according to the specifications of the printing site that will process these files. Those predefined setups named *Directives*. Spire directives can be configured and installed as part of the Synapse prepare package.

In doing so, we are assured that a Synapse Prepare PDF will be production-ready. Creative designers save time and effort, with an easy and reliable PDF creation tool.

2 Synapse InSite is the Internet Portal Into Prepress
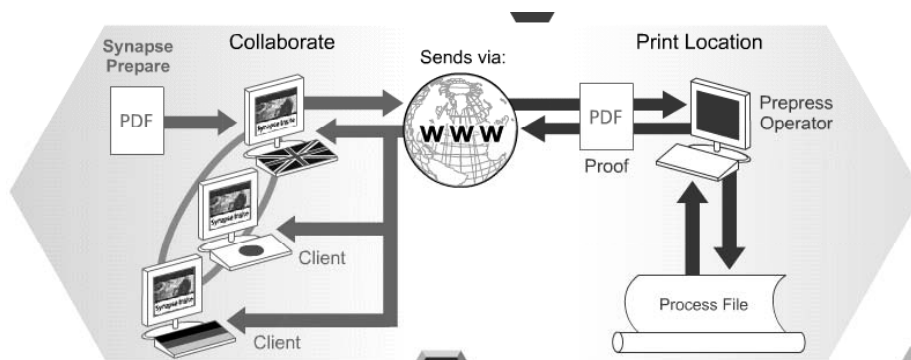
Job Submission and Internet Collaboration

This product is used to submit content, provide job specification information, perform remote proofing, enable content collaboration, and manage content approval via the Internet.

Job Import/Export: This utility uses JDF-compliant job export file to exchange job data, imposition information, and page assignment information between systems. This is currently available in the entire range of Prinergy workflow products.

Job Approval using InSite package allows the print buyer, creative professional and the Customer Service Representative (CSR) to work from remote locations over one virtual desktop. This enables to gap between expected quality, content, layout and other logistics and pricing issues until approval is achieved.

Job Tracking after the job is approved and submitted the print buyer can track his job and view the progress of printing at any given time.

3 Production Management Component

The **Synapse Director** is serving as the gateway to NGP's production flow. It is connected to Synapse InSite as the communication tool between the print buyer and the print provider. It is also connected to the production system, where Creo workflow tools such as **Spire**, Prinergy and Brisque are operated. Synapse Director also provides the bridge to the management systems, through Synapse Link.

Using Synapse Director the user submits the jobs to the **Spire** and monitors their progress.

The **Spire** user interface will be remotely accessible from Director, allowing watching the jobs in the process and the print queues and programming the jobs from the job programming window.

4 Managing Customer Data

As today, the demand for customized and tailored information is rapidly growing. The amount of data elements is huge, and managing it requires more then just a storage space. The NGP's software package named **Synapse content** provides efficient and reliable source of customer information data and elements. Synapse Content is designed to accelerate the production cycle while keeping customer consistency. Customers are very sensitive to quality and consistency; this approval flow may become, and most likely will become a very time consumable stage. By providing standard API's to the productions machines, such as **Spire** Color Server, the information can be retrieved and reused across jobs with eliminating errors and inconsistency of color, layout, fonts, etc. This data will all be retrieved and archived as needed during the production process. With Synapse - Content **Spire** users will be able to search, register,
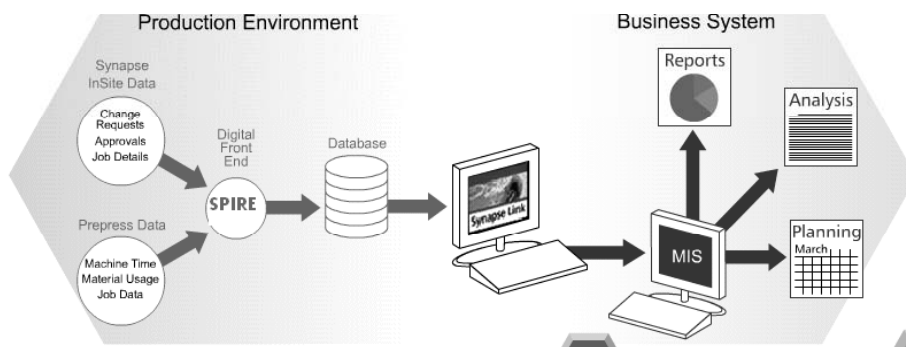
archive and submit files. The **Spire** can utilize the use of APR (Automatic Picture Replacement)/OPI image locator using content.

5 Linking MIS and Prepress Production Systems

An important aspect of a Networked Graphic Production environment is the ability to exchange information instantaneously between the prepress production systems and the MIS system. This can be achieved by software package named **Synapse Link.** Automated data exchange gives the printer the ability to better manage inventory, identify profitable jobs, create accurate invoices, and develop more efficient production processes. It ensures the printer is able to increase profitability by automatically collecting accurate and timely job-costing information.

Several MIS system vendors are now able to export job-planning information via JDF from their estimating packages. This information can be imported into production planning tools like the ScenicSoft™ UpFront® product to produce job tickets for the workflow production systems.

6 Submit Your Job To Print Digitally: Spire Color Servers

Spire Color Servers connected to Xerox DocuColor printers, allows graphic arts and commercial printers to add digital printing capabilities to their services portfolio while continuing to use their existing workflow systems and procedures. This enables them to offer an additional printing services to their existing customers like *short run printing, variable information and other digital printing unique applications.*

Spire offers:
- Exceptional performance and productivity
- Connectivity to the world of Graphic Arts

The Spire is featured with a "Graphic Art Port" that enables the consumption of Graphic Art formats as TIFF, TIFF/IT, etc. and Brisque formats. We support the connectivity to the Brisque and the Prinergy that drive the Creo Image Setters and the Creo Computer to Plate devices, and are the most common DFE used in Graphic Arts and Commercial Printing shops, enabling smooth integration of the Spire with Graphic Art and Commercial Printing environment
- Superb quality based on Creo color management and imaging technologies
- Flexibility workflow and ease of use
- Comprehensive, open and robust Variable Information solution