

PRODUCING RAFALE DOCUMENTATION

Rafale support documentation is designed to be managed electronically from start to finish. Sogitec is contributing its proven tools and extensive expertise for this ambitious project.



François Robineau - Dassault/Aviaplans



Rafale equipped with Mica and Apache missiles.

The stages involved in producing documentation for the French forces' future multirole combat aircraft, from design and development through to production, distribution and consultation, have already been featured in these columns (Interactions No. 15).

In this article, we will be taking a broader look at the documentation production cycle right up to final delivery. We will see how electronic documentation is changing things for end users in another article in the next issue of Interactions.

FULLY ELECTRONIC DOCUMENTATION

Rafale support documentation has been conceived in line with the integrated logistic support (ILS) concepts defined and implemented by Dassault Aviation, the aim being to ensure users' needs are satisfied throughout the aircraft's entire service life. Documentation is fully electronic from design data (digital models built using CATIA) to on-screen viewing by users—the first time aircraft documentation has been developed using an all-digital approach.

Sogitec is closely involved in this project, where it is bringing the full spectrum of its electronic document management skills to bear. The project's main aim is to build a structured documentary database comprising data modules in SGML format which the customer assembles and "publishes" to meet the diverse needs of crews and maintenance personnel.

STRUCTURED DOCUMENTATION

The source data needed to develop documentation are identified by a Dassault Aviation/Sogitec integrated project team.

These data are principally digital models built with CATIA used to generate the figures and illustrations in crew, identification and maintenance documentation.

During this initial phase, logistic support analysis (LSA) results are

fed into a database which stores and manages all logistic data and identifies field engineering operations.

Maintenance procedures are then validated during readiness and maintainability checks (VAMOM: *Visites d'Aptitude à la Mise en Œuvre et à la Maintenance*). All these results also serve as source data for the final documentary product.

GENERATING DATA MODULES

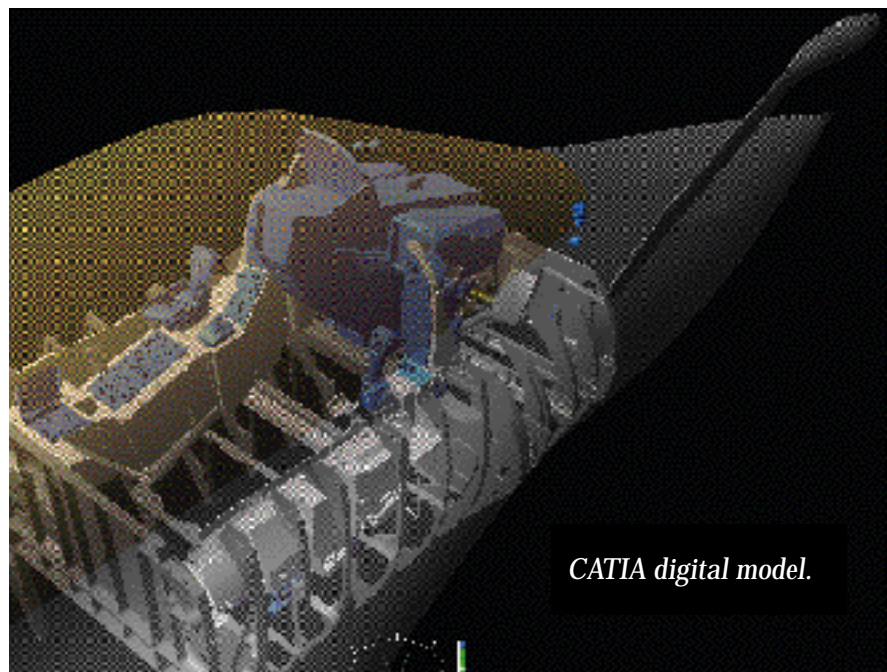
The next step in the documentary production process involves collecting and managing the reference source data needed to acquire the necessary information and generate the data modules.

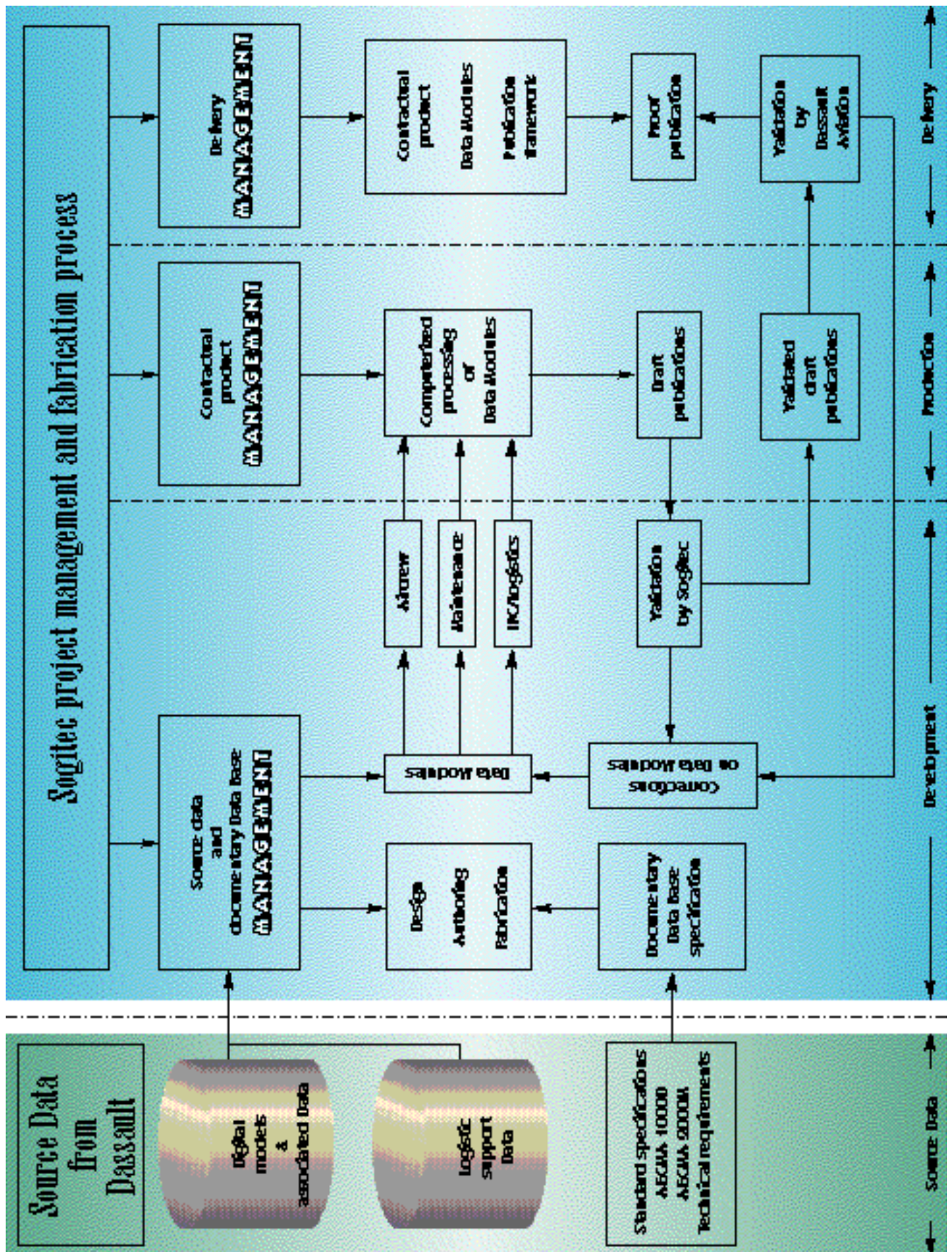
During this phase, Sogitec's spe-

cialist teams draft the crew, identification and maintenance data modules in accordance with the general technical requirements, based on the AECMA 1000D and 2000M specifications. To enable users to navigate through hypertext links, documentation has to be tightly structured and data consistency closely controlled by avoiding redundancy (for example, an illustration in the IPC may also serve to illustrate a maintenance procedure). Integrating source data and structuring the documentary database are two areas where Sogitec generates significant added value for the customer.

TWO-STEP VALIDATION

Before Sogitec can validate the documentary product, it first as-







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Air force version of two-seater Rafale. Behind: naval single-seater version equipped with Mica and Magic missiles.

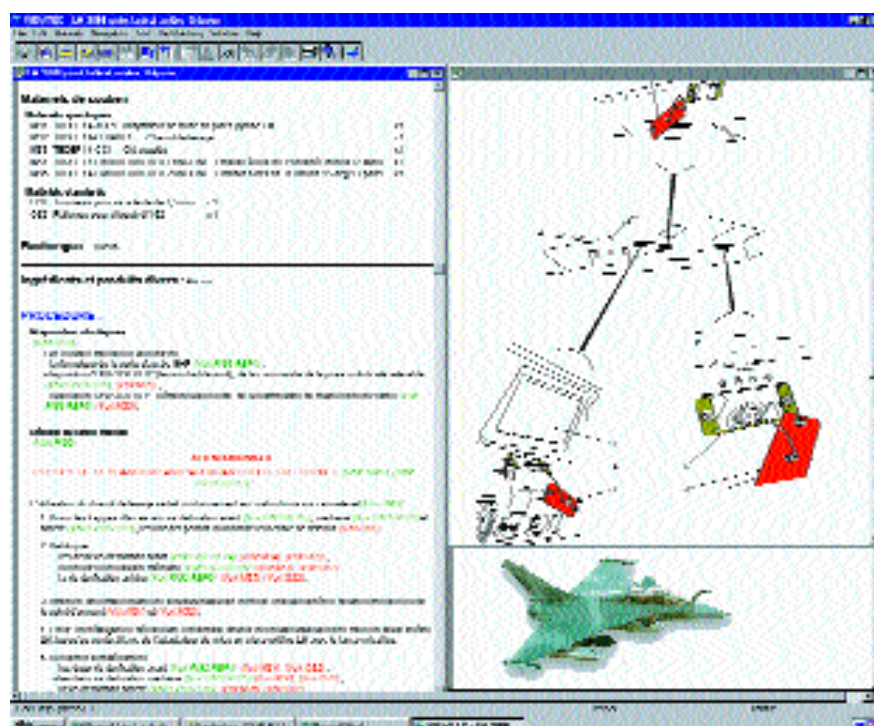
semples the data modules into “industrial publications”. These publications serve to validate technical content (inspections and checks on test benches or aircraft) and form (readability, hyperlinks, etc.) as well as compliance with the general technical requirements. Once Sogitec has validated the documentary product, it submits it to Dassault Aviation for final validation accompanied by a justification file specifying the source data. After making any necessary changes identified during this second validation phase, Sogitec generates the final documentary product deliverable to the customer, which consists of data modules in SGML and publication outlines (i.e., suggested ways of assembling the data modules). A master copy of the delivered documentary product is left with the aircraft manufacturer.

CONFIGURATION MANAGEMENT

Managing the configuration of Rafale support documentation is a critical task that involves making

sure that the documentary database remains perfectly in step with applicable changes to the aircraft configuration. That sounds simple enough, but in reality it is a complex process. After receiving change proposals submitted at specialist reviews, Sogitec analyzes their impact on the documentary database and identifies necessary document revisions to upgrade the documen-

tary product. First deliveries of electronic documentation will begin in September 1999. Final delivery of Rafale support documentation to French forces is scheduled for the year 2000 with the first series-produced aircraft. Documentation will then be updated twice yearly until 2002 to integrate changes and feedback from users.



Rafale documentation: instructions for removing a missile launcher.