

FREE-ACCESS CONSULTATI

By adopting ViewTec™, the same consultation tool as the aircraft manufacturer, SNECMA will enable its customers to make full use of the documentary database of the M53 engine powering the Dassault Mirage 2000.



M53 engine removal.

The quantity and diversity of an aircraft's components are such that it is vital for the manufacturer to do everything in its power to ensure the consistency of its product for the different users: pilots, maintenance and logistics support teams. The technical documentation, which is an indispensable support for maintenance interventions on the aircraft, must consequently fulfill this consistency requirement. It is in fact the one thing that each person at their own particular level refers to help maintain an aircraft in flight-line.

A REFLECTION RESULTING FROM THE IMPETUS OF CALS



In this context, SNECMA, as Dassault Aviation, decided to acquire the ViewTec™ package developed by Sogitec as a support technical documentation consultation system.

In other words, the engine manufacturer and the aircraft manufacturer want any customer to be able to use their respective documentary databases thanks to an identical tool.

The setting up of this joint consultation system (SCC) is the culmination of a reflection by the two companies in the framework of the impetus created by CALS (see glossary), and their desire to develop common standards.

In the long run, it is the dialogue between the companies and their

French and foreign customers that will benefit above all from this new approach.

The gain for the user will be immediate. Consultation of the M53 engine support documentation on the workstation screens shall be accomplished through an interface with ergonomic, user-friendly and intuitive characteristics, which are exactly the same as those of the aircraft documentation.

He will use a single software program for the two documentary databases; the only difference possibly being the "style sheets" (which dictate the final appearance of the graphic display) which each manufacturer can personalize.

ViewTec™ provides the end-user with a unique tool for consulting heterogeneous documentary databases resulting from different constraints, thus enabling him to work at his own rate and according to his own needs.

The gain for the companies is substantial since they benefit from product consistency, optimize their investment on a common product, and reduce costs accordingly.

TOTAL FREEDOM TO BROWSE



The SCC functions under Windows NT in a stand-alone configuration or an Intranet type network.

The documentary databases that can be consulted using ViewTec™ are either stored on CD-ROMs in the case of independent stations

ON OF SNECMA'S M53 ENGINE

or are accessible via a client-server architecture. Whatever the consultation medium, ViewTec™ always offers the same ease of operation and viewing comfort. The consultable "material", in other words the documentary database of the M53 engine, consists essentially of document units (DU) – text and illustrations – grouped to form collections of publications.

The ergonomic characteristics of ViewTec™ let the user navigate freely and activate the various links required by the maintenance tasks, both within and between document units.

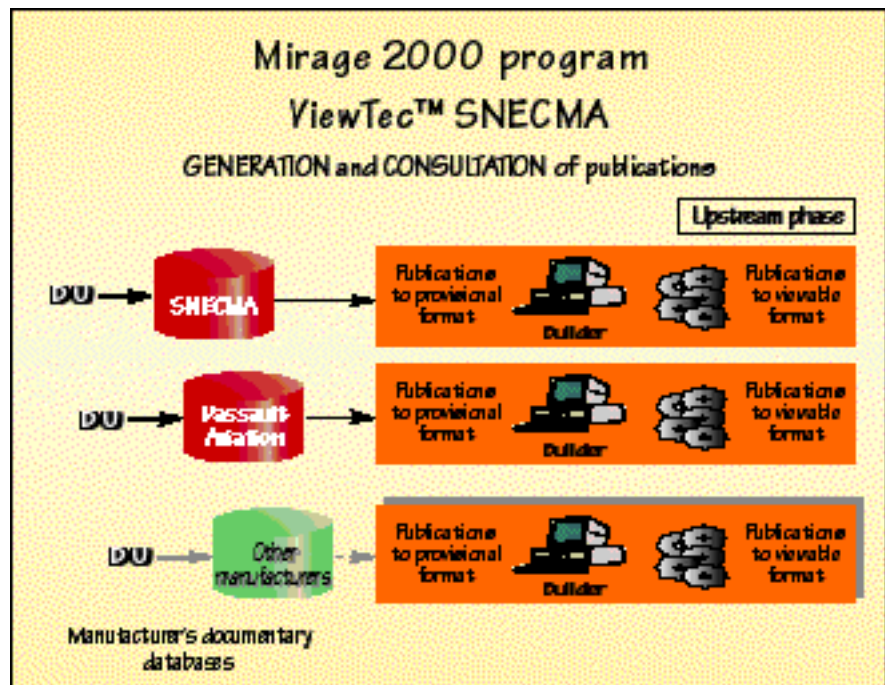
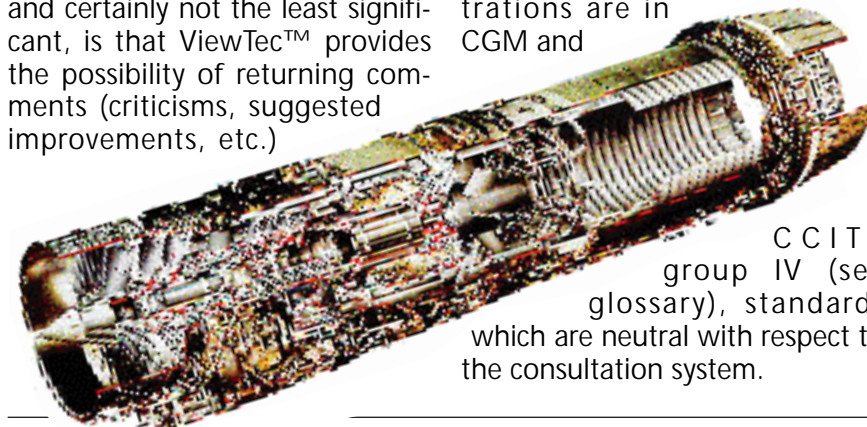
It can also search for and then retrieve text or graphic folders and print them or export them to another software function.

The manufacturer updates the document database by issuing new CD-ROMs.

Between CD-ROM issues, "provisional supplements" or service bulletins in electronic format are issued.

Whatever the case, the end-user is always guaranteed to have information at the latest revision index corresponding to the technical improvements and/or novelties of the products, in a totally transparent manner.

Another advantage of the system, and certainly not the least significant, is that ViewTec™ provides the possibility of returning comments (criticisms, suggested improvements, etc.)



to the manufacturer, in either paper or electronic form.

CONSULTATION AND VIEWING STANDARDS



This user-friendliness results from the combination of several coding and operating standards, associated with the power of the data processing support.

The texts are coded in SGML language, while the illustrations are in CGM and

CCITT group IV (see glossary), standards which are neutral with respect to the consultation system.

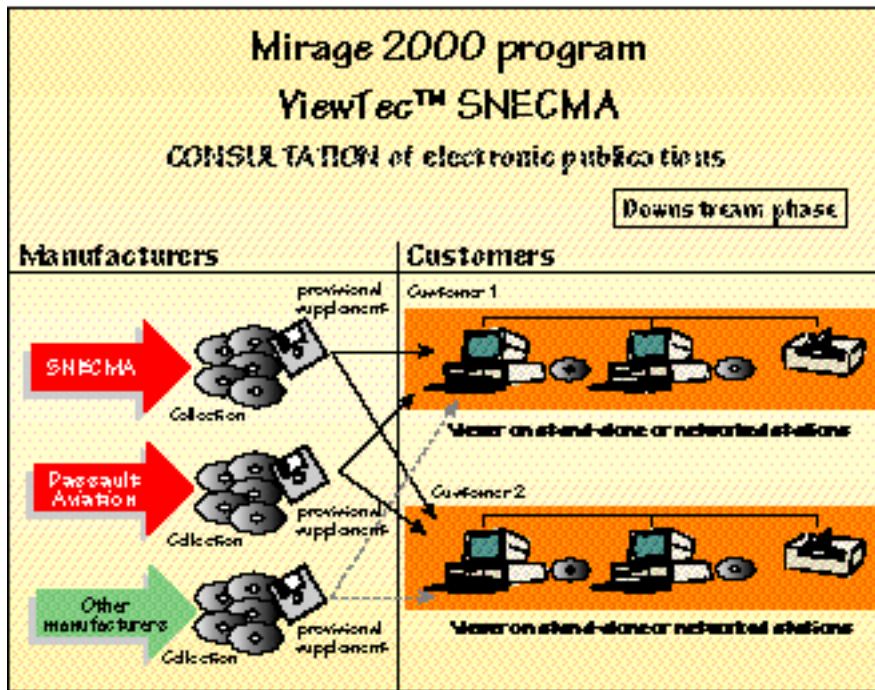
They require a "builder" which enables the information to be produced in a consultable format.

This is the role of Builder, the first of two software programs giving the manufacturer the possibility of indexing information, creating dictionaries, developing style sheets, converting text and drawings into consultable format, preparing CD-ROM engraving, etc.

In more general terms, it is the tool that allows electronic documentation to be personalized.

Then things are taken over by Viewer, designed for end-users, which enables the documentation previously formatted with Builder to be viewed.

At this level the HyTime standards allow browsing within the documentary database via the previously programmed links.



The engine M53 users can thus be completely independent in the organizing of their support logistics.

Moreover, it is planned that SNECMA should use ViewTec™ for its own requirements.

The Builder was delivered to SNECMA in January 1999, and the technical assistance with the starting up of the software package (notably special training in the creation of style sheets) was provided by Sogitec.

Having a documentary processing tool used in common by two different manufacturers confirms Sogitec's mastery of electronic systems for the production, management and consultation of information.

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**HIGH LEVEL
OF AUTONOMY
FOR LOGISTIC
ORGANIZATION**

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The documentary database that SNECMA makes available to its customers covers the NT12 operations (2nd line maintenance level) implemented by the end-user on its own facilities or on those it has delegated.

For the M53 engine this essentially concerns air force technicians and logistic specialists (- French and foreign air forces equipped with Dassault Aviation aircraft and SNECMA engines).

Later on the engine manufacturer will be able to upgrade the SCC to include the consultation of documentary databases relating to

3rd line maintenance operations (NT13), which are usually carried out by the manufacturer or in specialized repair shops.

GLOSSARY

- DU (Document Units) are fragments of information resulting from the breakdown of a structured documentation to SGML standard, complying with a predetermined tree-structure (maintenance sheet, subject of description, figure from illustrated parts catalogue, etc.), according to the fragment size which is governed by configuration management.
- CALS (Computer-aided Acquisition and Logistic System): set of standards defined by the American Defense Department with a view to facilitating information exchanges between manufacturers.
- CGM (Computer Graphic Metafile): international standard for two-dimension (2D) vectorial illustrations.
- SGML (Standard Generalized Markup Language): international standard for the marking of structured text used by CALS, ATA (Air Transport Association) and AECMA (European Association of Aeronautical Equipment Manufacturers). It dissociates the content of the document from the creation and consultation software products used.
- HyTime (Hypermedia Time Based Structuring Language): international standard used to describe hypertext links.