FRAME - A Concept for Documentation at ABB Data

Lars Hemingstam

Kreativ SystemUtveckling, Stockholm, Sweden

Traditional models for systems development offer little, or no, guidance concerning the production of end-user documentation.

Anyone who is starting to write end-user documentation runs across many initial problems. Is there an ideal structure for a manual? How should the page layout be designed? What is the best way in which to describe an on-line dialogue? How can I engage the end-users in the documentation process?

FRAME is the result of an ambition to describe system applications from the end-users' point of view. The concept has been developed by ABB Data during 1987-88, with the participation of end-user representatives in three pilot projects. Several additional documentation projects using FRAME have been completed since then and still more will be completed during 1989. The reactions from writers as well as end-users have been very positive.

The concept consists of general recommendations for a documentation project, standards for presentation of common functions, such as integration of information between systems and on-line dialogues, as well as technical support for producing documentation in an IBM VM/CMS environment.

THE PROBLEM

"This is how our new system will make your work easier."

There are many tools and methods supporting systems development, but how do you present the result - the system and its advantages - to the end-users, reference-group members and company management?

When system documentation is produced, at all stages of the development process, much effort is by tradition concentrated on describing facts correctly and defining logical relationships in more or less technical terms.

Elementary pedagogical considerations and presentation techniques are often neglected.

Intricate flow-charts and system configuration diagrams are readily included in end-user documentation, with the intention of clarifying matters, even though few end-users are trained at interpreting the charts.

Communication between the system developer and the end-user is thus often carried out on the terms of the developer.

It is certainly no simple task for the system developer to present the output of an analysis in a way that is easy to understand and relevant to the end-user.

A SOLUTION
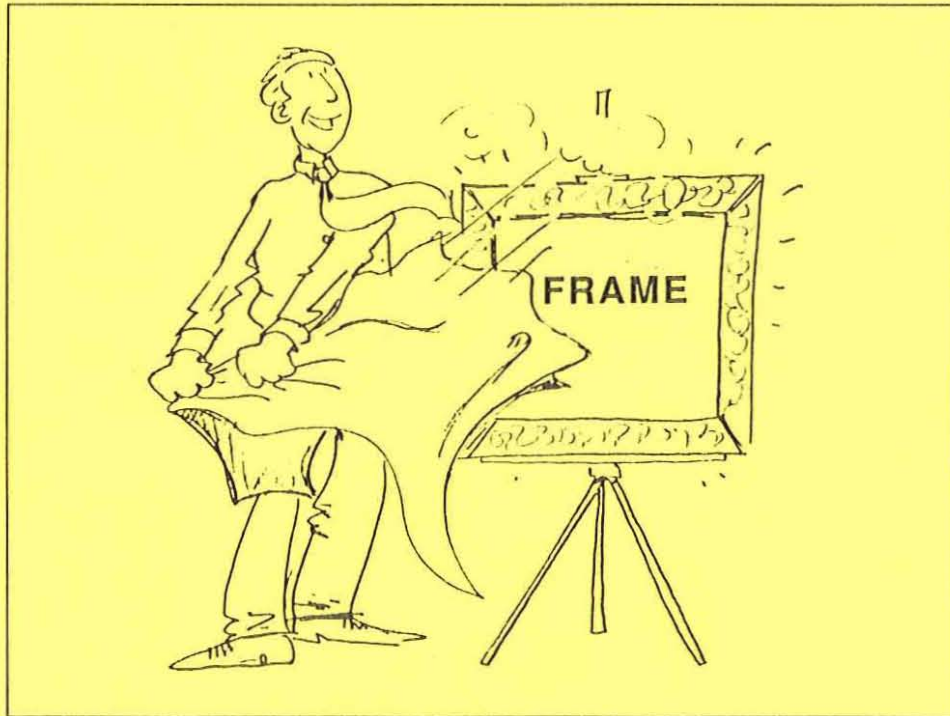
FRAME is a concept for documentation developed by ABB Data.

The FRAME concept consists of two main parts:

1 Rules and recommendations for organizing a documentation project, structuring the contents of a manual, editing texts, layout considerations, etc.

2 Technical support for producing documentation using IBM CAP technique in a VM/CMS environment (DCF/Script and 4250, 3820 or 3812 laser printers).

The goal for developing FRAME has been to find a way in which to describe a system application from the end-user's point of view.

FRAME is now used by ABB Data for producing manuals for end-user applications, but is also intended to be used for writing pilot studies, system specifications, etc.

ABB Data

ABB Data offers its clients (the companies of the ABB Group) solutions to functionally oriented problems.

An end-user in one of the ABB companies is most often a user of several system applications, e.g. construction systems are integrated with production- and purchasing systems and the end-user functions can span over these system boundaries.

In many cases the end-user is not even aware of the fact that he/she is switching between different applications when carrying out operations.

New corporate organization

When the decentralized organizational structure of the ABB Group was implemented, the experienced central staffs of the parent company no longer existed, and the staff functions were to be carried out by independent ABB companies.

This created a great need of better information concerning ABB Data systems to many new end-users with little or no experience of the applications.

From this need of a total review of the existing documentation, the FRAME project emerged in May 1987.

FRAME

As the name indicates, FRAME is mainly a tool, or frame, for presentation. FRAME can be regarded as a link between the development environment and the end-user environment.

The concept was developed by a project group during 1987-88 and involved defining the following items:

- The activities of a documentation project.
- The structure of a manual.
- Text editing recommendations.
- The documentation layout.
- The publishing technique.
- Organizing documentation maintenance.
- Introducing the documentation to the end-users.

Three application systems were used as test cases - a purchasing system, a project administration system, and a system for quality control.

Every phase of the development process was presented to the reference groups of the test projects for approval.

As a result of the FRAME project, ABB Data has obtained a standard for end-user-oriented documentation, to be used throughout the system development process.

The technical writer

At an early stage the FRAME project group found that producing documentation is a full time task for a specialist.

The need for a technical writer function has been recognized in industrial production for many years, but the same need is not commonly acknowledged when developing administrative system applications.

ABB Data has now formed a special group of technical writers. The writers also act as project leaders for the different documentation projects.

The technical writer is as essential as the programmer, the system analyst, the project leader and any other specialist if a development project is to become successful.

A documentation project
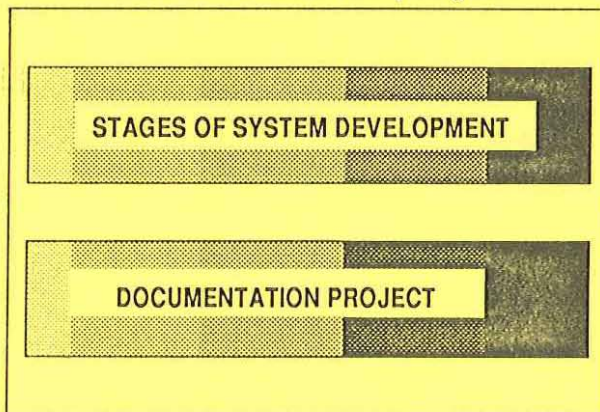
The documentation project runs parallel to the system development process.

In a separate pilot study for the documentation project, the following is defined:

- Which functions that are to be described. This is thoroughly checked with a reference group of end-users.
- Different reader categories; their characteristics (such as previous EDP-experience, general level of education, etc) and thus their documentation requirements.
- Limits of the assignment.
- Project plans.
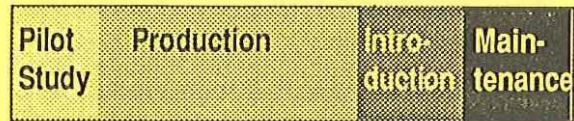
In the production stage the writer describes each function, chapter by chapter.

Describing functions as seen by the end-user is the foundation for FRAME documentation.

This is done in an over-view manner using *written scenarios* or *case studies* and in a detailed manner by describing functions in the end-user's business/production environment and relating the system to these functions.

To accomplish this it is necessary to:
- Define the relevant functions.
- Describe them in the correct step-by-step order.
- Relate them to surrounding activities.
- Use the same terminology as the end-user.

This is made possible by close co-operation between the technical writer and a reference group consisting of end-users and system developers.

The reference group studies, alters or gives approval to the texts produced by the technical writer. The reference group checks that the texts can be easily understood by none-EDP-professionals and that the facts are correct.

The introduction stage is just as important as the previous stages. For new applications the manual is distributed in connection with the initial training courses. For existing applications a special introduction meeting is arranged for the end-users to get acquainted with the manual.

The documentation structure

The structure of the documentation is designed to make it possible to produce tailor-made manuals (across system boundaries) for different categories of end-users and to facilitate easy-to-understand explanations of system integrations.

Every function (as defined from the end-user's point of view) is described in a separate chapter. By combining selected chapters from different manuals, a category of readers can obtain a manual that is designed for their special requirements.

The documentation layout

A great deal of effort has been made to design a standardized layout in order to make the contents easy to read and to understand, and to gain efficiency in the documentation process.

Using FRAME, many initial problems that arise when producing documentation have already been solved, and the writer can concentrate on creating the text.

The standardized layout also applies to step-by-step examples of on-line conversations, simplified flow-charts illustrating paths between menus and panels, and standards for describing reports and screen layout.

On-line dialogues are described by means of step-by-step examples. The screen content is retrievd from the application system.

Reports are retrieved from list files to be included in the manual.

12.1

Funktionsbeskrivning

CI20A
Söka köphand-
lingar

CI20A
Registrerade
bestsökvillkor

CI173
Översikt Beställ-
ning

☐ Artikelnummer
☐ Ordernummer
☐ Leverantörsnummer
☐ Konto
☐ Inköpshandläggare
☐ Orderplanerare

ABB Data

INKÖP - Material-/Orderplanerare   Visa beställning   12-5

Simplified flow-charts show the recommended working order.

PU51

FÄLTNAMN	FÖRKLARING
KUNDNR	Kundnummer eller företagsnummer
ANSV	Kostnadsställe enligt EPOK-format
SLAG	Kostnadsslag enligt EPOK-format
SUB/USUB	Sub- och undersub-nummer
PKL	Produktklass för uppföljning
L-ORD	Här anger Du huvudnumret för en L-order
BELOPP	Belopp
DEL/SLUT/TILL-LÄGG	Kod för internt PLUTO-bruk för att redovisa fakturer-ingsstatus på uppdraget

ABB Data

PLUTO   Snabbguide   33

Standardized descriptions of fields and screen layouts.

8.1   **Registrera beställning köpanmodan (CI704)**

Översikt

Du kan registrera en beställning direkt i köpanmodankön

ARCADE
BEO
CM F/L
PROMAC
SPEC

ABB Data

8-2   Registrera beställning   INKÖP - Material-/Orderplanerare

The arrows incdicate system integrations. There are automatic index references to these symbols.

9.1

Arbetsgång vid lönerapportering

ABB Data

PROMLÖN   Lönerapportering   9-5

Various illustrations are read by scanner to be included in the documentation.

6

The publishing technique

The IBM CAP technique was chosen for the large number of documents that are to be produced using FRAME at ABB Data.

There is also a need to combine parts from different system application manuals to produce tailor-made documentation for special reader categories. The VM/CMS environment provides a well known solution to the file handling requirements.

ABB Data possesses an advanced knowledge of the IBM CAP technique from previous publishing projects.

CAP support for FRAME

- The FRAME layout is defined in the DCF/Script markup language.
  The technical writer creates the text and places a mark in the text file where symbols (e.g. an ENTER key) is to be printed.
  The page layout, page shifts, headline fonts, etc., are controlled by DCF/Script (and by a special FRAME customization of DCF/Script).
- Copies of screen contents and report examples can be transferred from the application system to VM/CMS and included in the step-by-step documentation of on-line dialogues. This applies to mainframe as well as PC applications.
- Field descriptions can be retrieved from a term catalogue and then included in the documentation. Each field description is stored separately and can be included recurrently in the text. When a field description is changed, every occurence is thus updated.
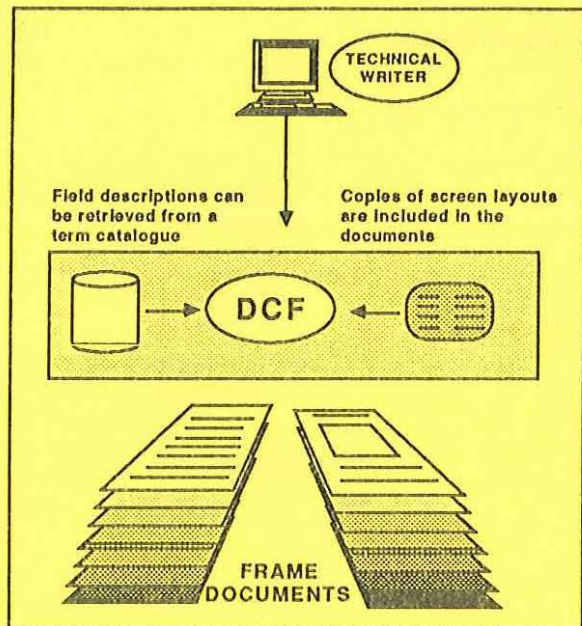
- A table of contents and index can be created automatically. A page reference to every field description is automatically included in the index.
- Descriptions of integrations are indicated by a special symbol and a page reference is automatically included in the index.
- Illustrations are read by scanner, stored in a system library and included in the documents when required.
- Printouts from a 4250 laser printer are produced on a reel and forwarded to a printing house to be printed on quality paper.