TESSELATOR
Display Management System

The software key to the ABB Tesselator
for VAX computers

ABB

ASEA BROWN BOVERI

Breakthrough

Many factors have contributed to the world-wide success of ABB Tesselator in process industries.

Most notable are its unsurpassed visual and display ergonomy, its facilities for rapid and easy assembling of clear reviews and detailed displays, and its ability to work with symbols, colors, full graphics, and blink and alarm functions. These features provide the maximum degree of visual ergonomy.

High capacity for local display storage gives the Tesselator fast response times. Other factors which have contributed to the success of the Tesselator are its fast, efficient communication with the process, the wide range of options available and its broad potential for expansion as the process is modified and developed.

With the DMS software, the ABB Tesselator is easily incorporated into VAX based systems.

A breakthrough in your process control activities.

Using DMS, you assemble your Man Machine Interface step by step, exactly as you want it. You compose the static display information, supplement it with dynamic functions and link the resulting display to your process data base.

To meet the needs of different users, DMS is arranged in layers. For instance, from the highest layer, a process operator can quickly and easily compose process displays at an extremely low cost. With Tesselator this is done interactively, on line.
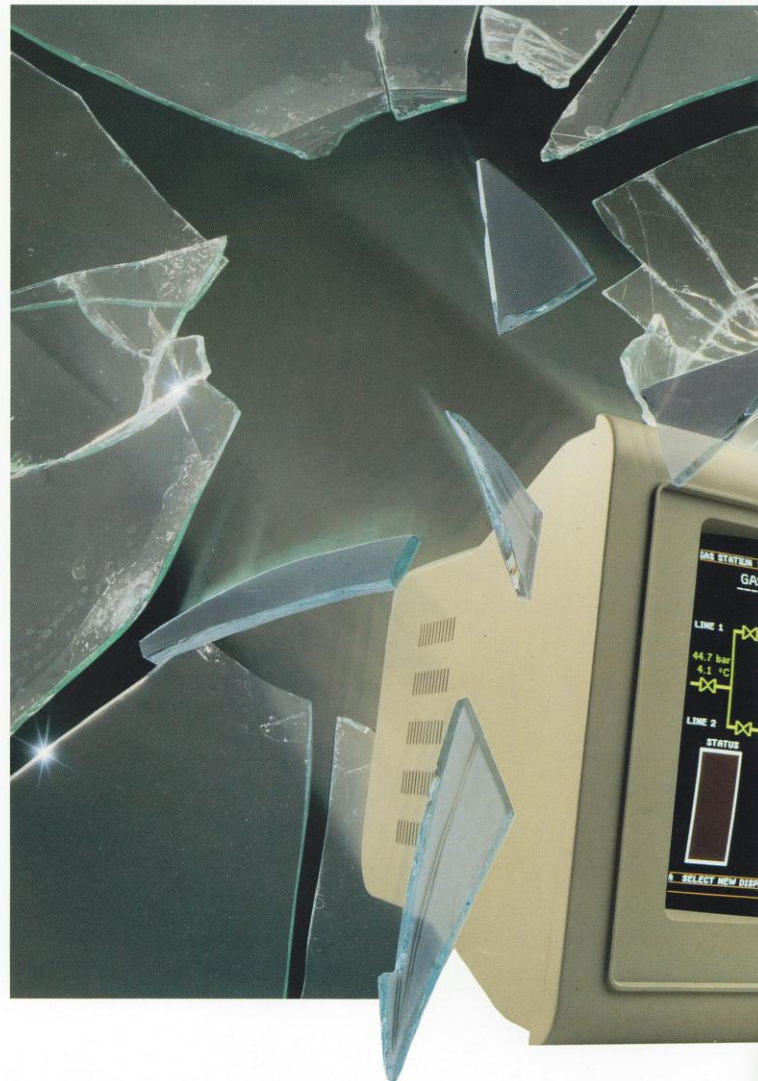
Corresponding operations can be performed in lower layers, with conventional programming languages using routines supplied for the appropriate layer. Static and dynamic screen information and the corresponding attributes and data base

references are easily defined with the DMS "toolbox", i.e. the interactive Terminal Display Editor (TED).
DMS also contains tools for the system builder to define keyboard functions, operator's access to the process, operator messages etc.
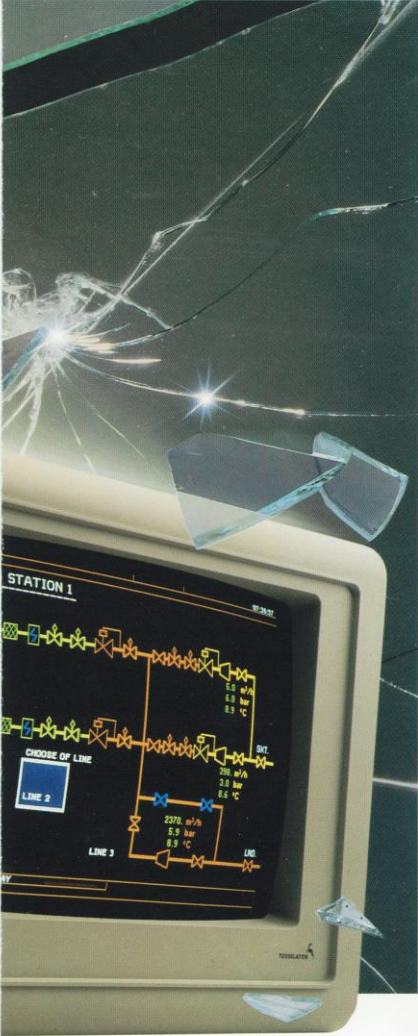
DMS-toolbox

TED, the Terminal Display Editor, is the DMS interactive toolbox which makes it astonishingly easy to visualise your process. All of the ABB Tesselator functions and display generation facilities are at hand to assist you, to give you the optimum overview and best possible ergonomy.
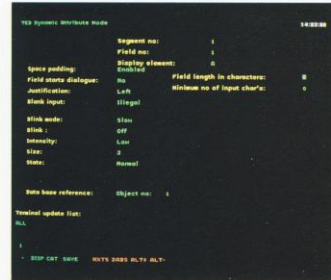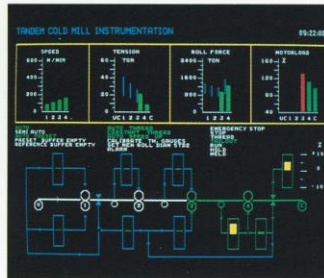

The dynamic values can be defined to change color at a preset level, or to start flashing, or to initiate alarms etc.

Finally, link the dynamic functions to the process data base. This is done in a high level language using thoroughly tested functions.
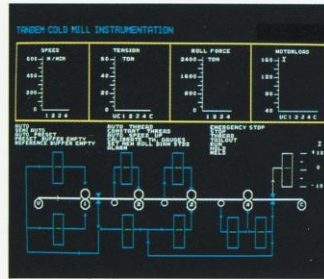
Start by defining the static information of the display. There is an extensive library of standard symbols (you can also define and store your own symbols), various line thicknesses, different character sizes and a variety of foreground and background colors.
Complex reviews and detail displays are quickly and easily assembled.

ABB Tesselator DMS is a highly developed and proven software package, intended for installation in systems with a variety of host computers. It is a powerful aid which facilitates rapid adaptation to different processes and applications.

Throughout the world, DMS has linked a wide variety of industrial processes to the finest color graphic display system on the market – the ABB Tesselator.
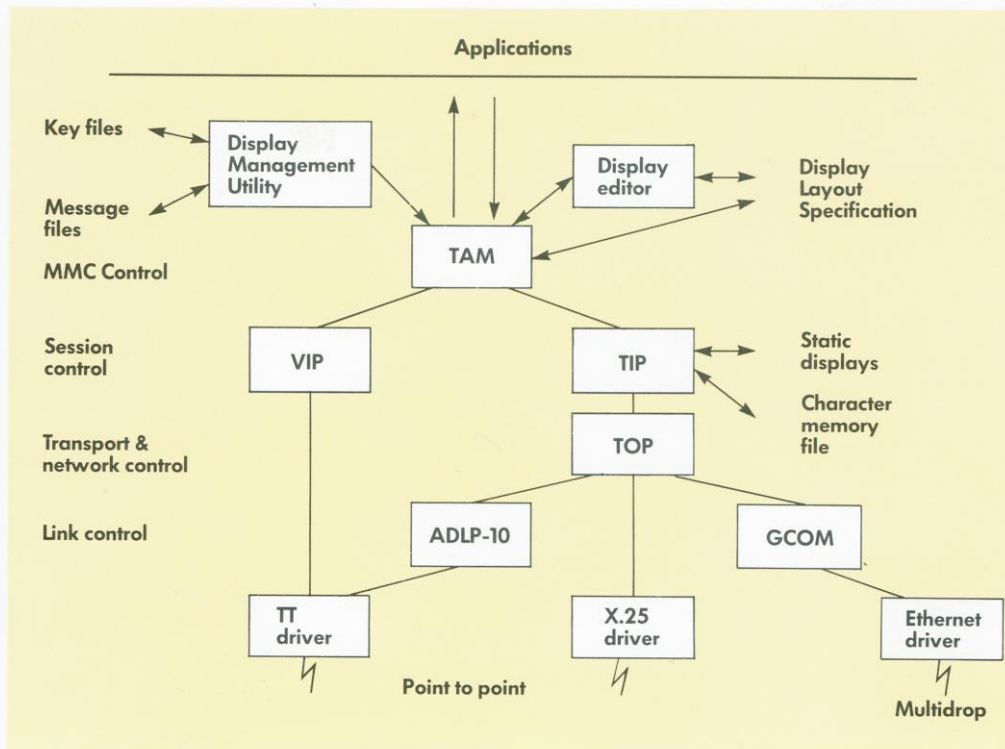

Now decide how the dynamic information should be presented. This is done interactively, in the form of fields, defined for numerical values, curves, schematic and flow diagrams, thermometers, histograms, etc.
The graphic facilities offer you complete freedom to present information clearly, with the optimum visual ergonomy.

DMS – VAX, MicroVAX

```
                          Applications
                              ↕
Key files ↔  ┌──────────────┐      ┌──────────────┐
             │ Display      │      │ Display      │ ↔  Display
             │ Management   │      │ editor       │    Layout
             │ Utility      │      └──────────────┘    Specification
Message files ↔             │              ↕
             └──────────────┘      ┌──────────────┐
                       ↘      ↗    │     TAM      │ ←
MMC Control                        └──────────────┘
                          ╱              ╲
Session         ┌──────────────┐   ┌──────────────┐  ↔ Static
control         │     VIP      │   │     TIP      │     displays
                └──────────────┘   └──────────────┘
                       │                  │          ↘ Character
Transport &            │           ┌──────────────┐    memory
network control        │           │     TOP      │     file
                       │           └──────────────┘
                       │            ╱          ╲
Link control    ┌──────────────┐        ┌──────────────┐
                │   ADLP-10    │        │    GCOM      │
                └──────────────┘        └──────────────┘
                 ╱         ╲              ╲
        ┌──────────────┐ ┌──────────────┐ ┌──────────────┐
        │ TT           │ │ X.25         │ │ Ethernet     │
        │ driver       │ │ driver       │ │ driver       │
        └──────────────┘ └──────────────┘ └──────────────┘
              ⚡                ⚡                ⚡
                  Point to point                    Multidrop
```

General description

The software functions included in the Tesselator Display Management System (DMS) are specifically designed and optimized to make full use of the local functions offered in the Tesselator. Functions like local editing and storage of displays and characters are an integral part of the DMS system that significantly improves the perfomance.

DMS contains all necessary functions needed to connect a process database to a modern Man Machine Interface based on the ABB Tesselator.

Software functions

DMS includes functions like display selection, decoding and encoding of data, validation of data, decoding of function keys, dialogues, management of static and dynamic displays etc.

DMS supports

* local displays (editing, storage)
* local characters (editing, storage)
* interchangeable relations between keyboards, display units and displays
* standard and user defined dialogues
* various types of presentations (values, bargraphs, trends, etc)
* message lines for alarms and events etc
* different VDU types

Programmers interface

Using macro calls or interactively under supervision of the DMS editor a graphic display and the location of dynamic fields are defined.

Utility programs are used to define message files, keyboard encoding and display system configuration.

An application display program controls the operator Man Machine Interface via a subroutine library. The standard VAX calling procedures are followed. The display program also selects display functions in dynamic fields and connects those to the process data base.

Requirements

Host Computer	VAX, MicroVAX
Operating system	VMS 5.0–5.n
Drivers	TT, X25.2 LAP/LAP B, IEEE 802.3
Storage	Source 20k blocks
	Object 15k blocks
	Load module 4k blocks
	Datafiles 50k blocks

Delivery

Media	Tape 1600 bpi, TK50
Form	Object code
Documentation	1 set included

Options

VIP VT100 interface
DMS source code
Sublevels of DMS also available.

DEC and VAX are Trademarks of Digital Equipment Corporation

Specify picture

DLSMACRO → Display Layout Specs

Editor →

Control MMI

Display program →

Run →

Messages → DMU

Keyboard →

Configuration →

TERLIB

Static displays
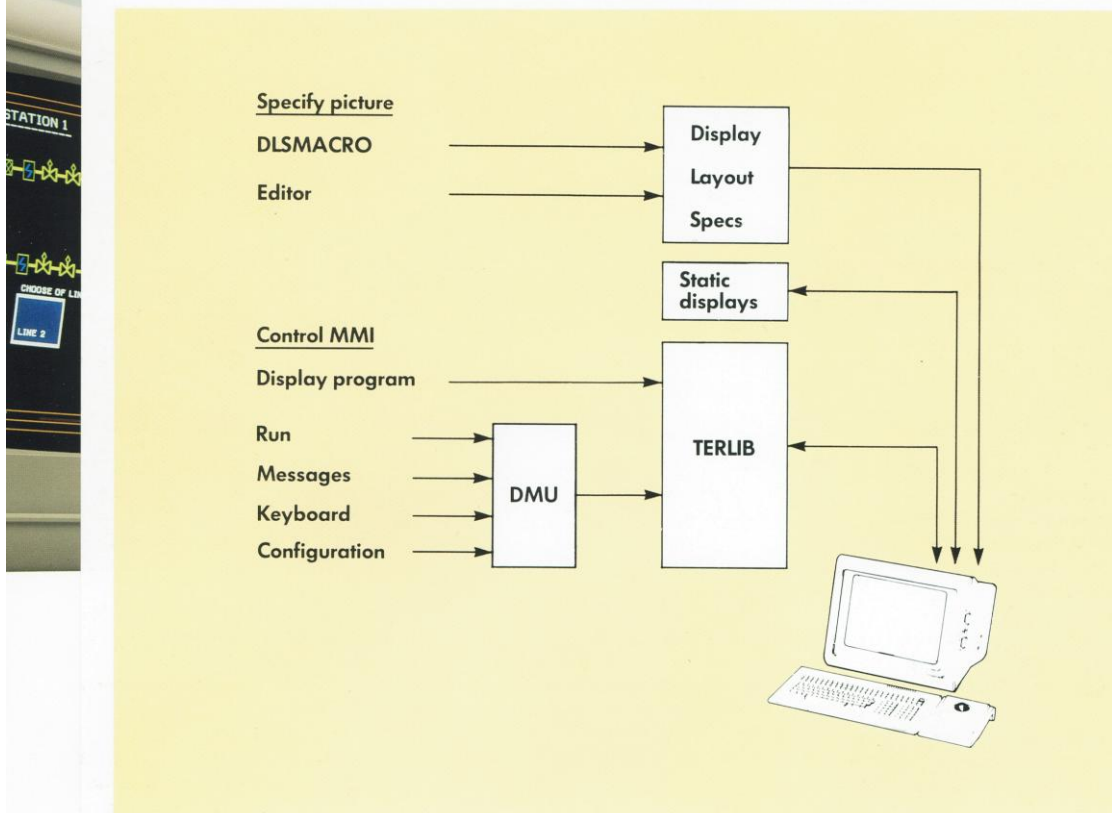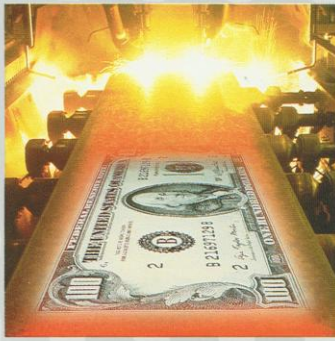
Security and reliability are keywords in process control – as are productivity and economy. The ABB Tesselator offers you a display system that gives the best possible facilities for effective supervision and control – a system used by the process industry throughout the world.
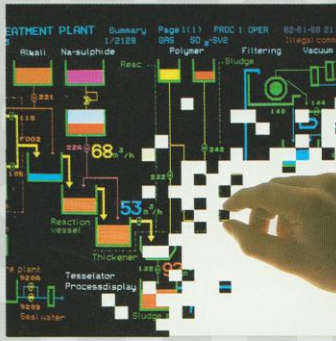
You can only monitor what you can see. Avoid anything that interferes with secure, effective process control.

The ABB Tesselator is the most vital link between the human being and the process. It offers superb facilities for assembling images, fast communications and a flicker free screen.
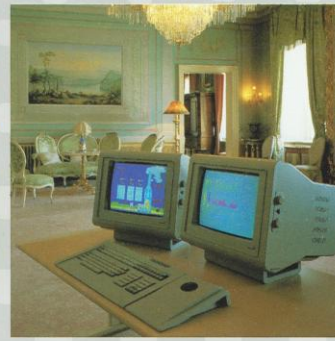
In the concept of the ABB Tesselator, we have set extremely high requirements on correct ergonomic design, security, legibility and fast communications.
ABB Automation is a company which commands great expertise in the field of MMC, Man Machine Communications. We can assist you with advice, training and maintenance.
ABB Tesselator gives you a front seat.

ABB
ASEA BROWN BOVERI

Asea Brown Boveri is a world leader in electrical engineering comprizing 200 000 employees, some 800 companies operating in 140 countries. The main business segments are power plants, power transmission, power distribution and industrial equipment. Access to modern control and supervision systems like ABB Master is of strategic importance to the group in deliveries to customers in these segments.

Business area ABB Process Automation, which belongs to the industrial equipment segment, designs, manufactures and markets ABB Master as well as systems for industrial force measurement and complete electrical equipment for industrial plants.

Specifications subject to change without notice

A07-6048E

VLT-PRESS. Västerås 1989