

INTERACTIVE ENGINEERING SYSTEM FOR MECHANICAL ENGINEERING (IESM)

Project manager:	H.-J. Heinrich, Dipl.-Ing.	Duration: 12/95 - 11/97
Authority responsible for the project:	The Free State of Saxony - Protec	
Project number:	2493/434	

Initial situation

In remote countries the requirements of customers in respect of service can only be met at high costs and, consequently, with lower effectiveness. If problems cannot be clarified by telephone, it will be inevitable for the machine manufacturer to send a service engineer to the user's machine site. The user is faced with machine stoppages which reduce the availability of expensive equipment. The machine manufacturer incurs higher costs as a result of the service assignments to be performed.

Research target

For Cetex gGmbH the target of the interactive system project was to develop an intertrade operating and visualizing system on PC-level under the Windows operating system by increasing the scope of functions of the CEMDIA diagnosis and service concept. It was intended in this way to create new multi-media additional functions as well as interfaces for these functions and for use-specific functions. An important requirement in this respect was to offer the total range of system functions under one surface.

Research result

Cetex gGmbH have developed within the framework of the IESM interactive system project an inter-trade operating and visualizing system on PC-level under the Windows 95 and/or Windows NT operating systems. This diagnosis system was tested on various machines of the project partners before it was presented and demonstrated at the EMO 97 international machine tool exhibition in Hanover. In detail, the following results were obtained:

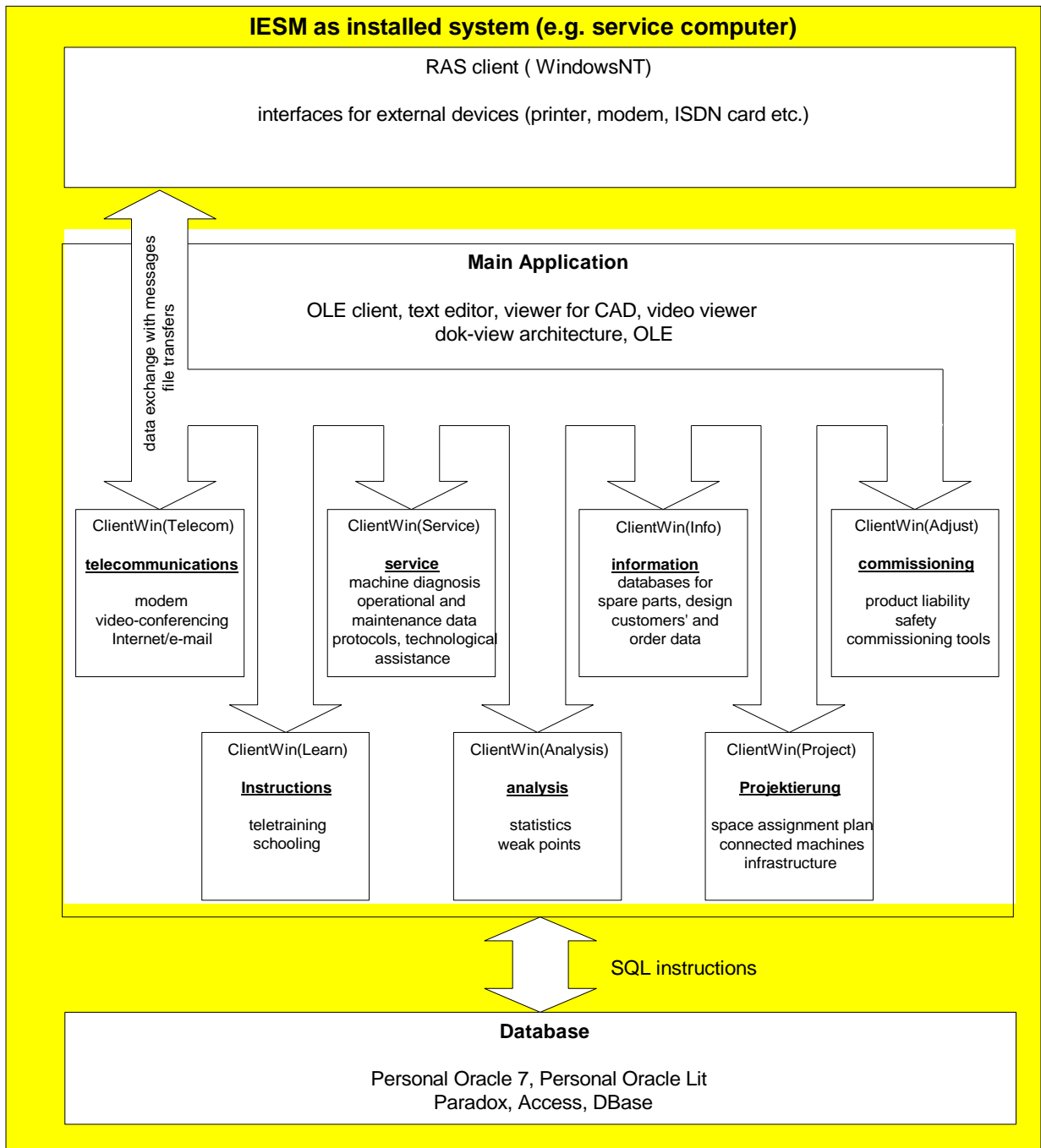
- development of a programme structure comprising the main groups, telecommunication, commissioning, service, information, analysis, training, and project design
- preparation of the device configuration of the interactive engineering system and commissioning of the components
- selection, installation and commissioning of a video conference system
- commissioning of the Pipe process between the IESM server and IESM client and/or IESM remote client
- installation and testing of the pcANYWHERE remote control software
- execution of data base access operations within IESM
- programming of 32-bit access mechanisms for PLC data.

Application and economic advantages

The Interactive Engineering System for Machine Construction allows to draw conclusions on the condition of the machine and to suggest suitable measures in case of defects. Thanks to multi-media components, contact with customers becomes more informative and is intensified. As a result, faster response to customers' wishes is possible.

The main economic advantages of IESM are

- reduction in customers' down times
- higher availability to customers
- lower service costs for the machine manufacturer
- greater customer satisfaction.



External databases and file formats	
databases:	Access, Paradox, DBase, Oracle, Sybase
text data:	Word, DOS texts, Acrobat, HTML-file
calculation:	Excel
graphics data:	pixel, vector and 3-D graphics
video formats:	video for Windows, MPEG data, video CD
sound data:	WAV and MIDI file, Audio CD
CAD data:	HPGL and DXF data
service data:	PLC data records, service protocols, ASCII file