

# XiBase9 - Graphical User Interface for embedded OS

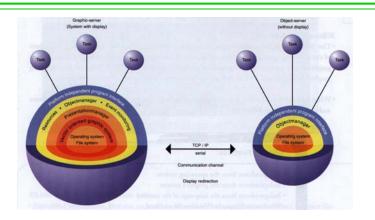
## Corporate background



- 1986: The development of a system independent graphics server for industrial environments was started
- Target systems: OS-9, UNIX and DOS
- 1988: First implementation on an OS-9 based bare board tester and an UNIX based data preparation station
- 1989: IBM in Endicott bought first machine with XiBase9
- 1994: XiSys Software GmbH was founded
- 1998: Microware and XiSys signed distribution agreement
- 2005: Distribution agreement with RadiSys in Japan

## XiBase9 - Components



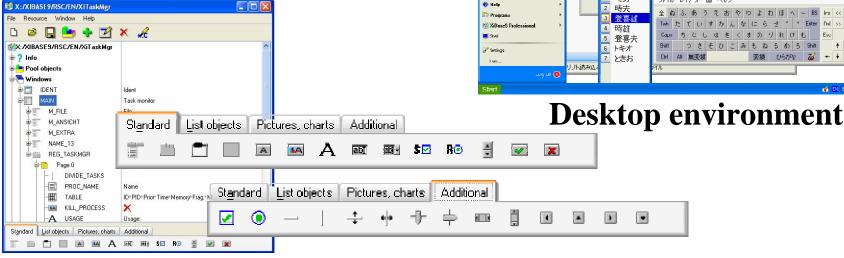


#### **Runtime environment**

- Local graphics engine
- Remote graphics engine



### **GUI Development Tools**

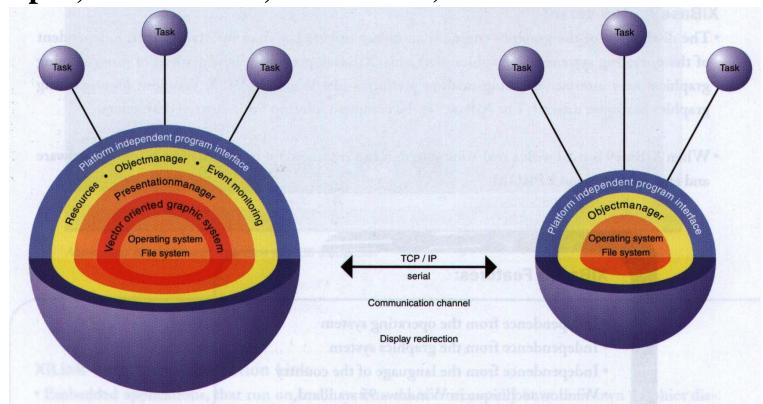


XiBase9 is the platform for embedded machines

## XiBase9 - Virtual Machine



GUI Server Object Server (display/input; local/remote; various OS) (i.e. embedded system)



Runtime environment for local and remote GUI

## Server - interfaces



### API functions in xi\_csl.l

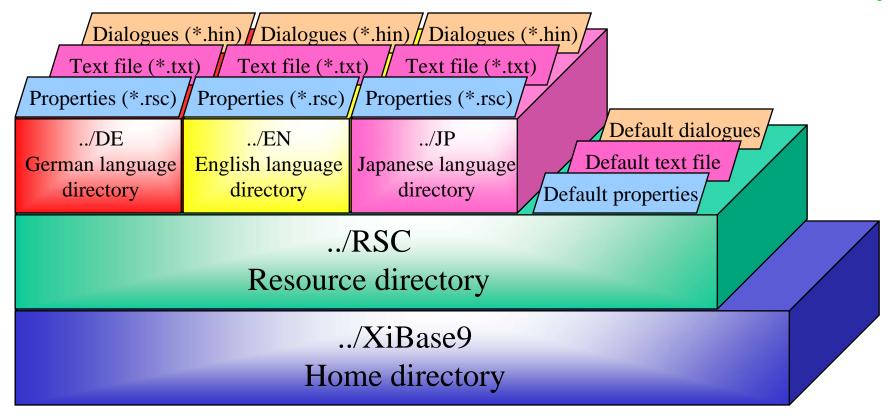
XiBase9 graphics server

Resource-, object-, event- and presentation manager

Vector graphic – interface OS – interface in XiGfx.dll in xi\_csl.dll VESA Frame Hardware Local file system **MAUI** buffer + ROM file system direct Bios **Microsoft** Win \* OS-9 Linux X Window Windows

# Language concept





Text information can be exchanged without compiling or linking the application!

# Memory consumption (Local graphics engine)



Application

xi\_csl
API-functions
in a shared library modul

XiBase9
Local graphics engine

Code size: 5 k ...

Dynamic consumption: 4 k ...

Code size: 150 - 250 k

Dynamic consumption: 0

Code size: 500 - 900 k

Dynamic consumption: 200 k ...

**Total consumption:** >= 1 MByte

# Memory consumption (Display redirection)



Application

xi\_csl
API-functions
in a shared library modul

XiLinkC Remote graphics Code size: 5 k ...

Dynamic consumption: 4 k ...

Code size: 150 -250 k

Dynamic consumption: 0

Code size: 100 - 150 k

Dynamic consumption: 100 k ...

**Total consumption:** >= 500 kByte

## Platform support



### Operating systems

- Linux
- OS-9, OS-9000
- Win NT/2000/XP
- Others ...

### Graphic platforms

- H/W direct, VESA BIOS, Frame buffer
- Win NT/2000/XP
- MAUI

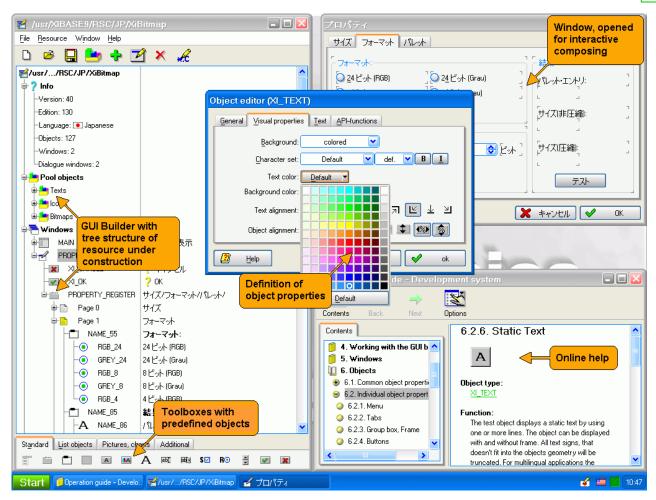
#### Processor architectures

- 68k, x86, PowerPC, SuperH, ARM/StrongARM

All major OS and graphic platforms supported



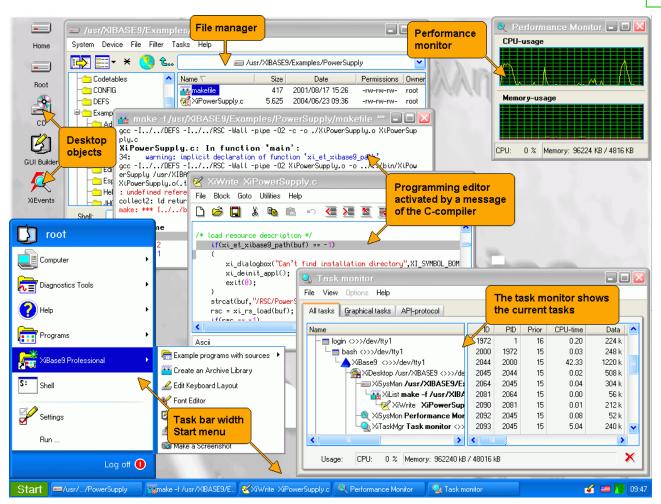




WYSIWYG GUI builder & diagnostic tools

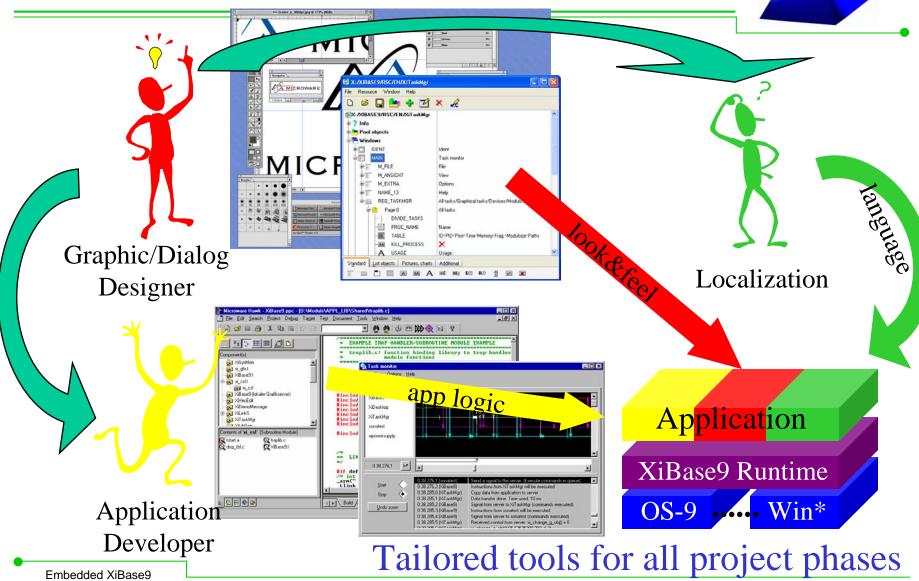






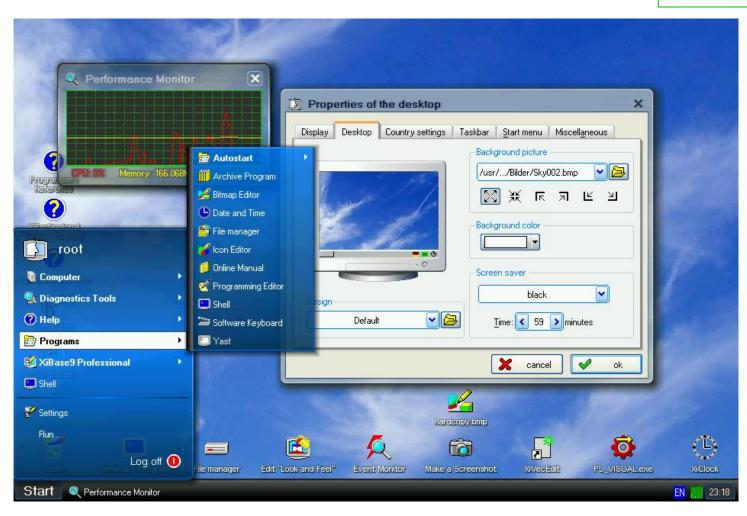
... on 2MB RAM, HDD optional







## The next step



Transparent windows for embedded systems

## Comparison: Vista – XiBase9



Vista XiBase9

**RAM:** >= 512 MByte >= 8 MByte

**Installation (Harddisk):** >= 8 GByte >= 4 MByte

CPU-Speed:  $\Rightarrow$  1 GHz  $\Rightarrow$  100 MHz

Graphics card / bus: AGP 8X, PCI-Exp. Any

Video memory: >= 64 MByte >= 2MByte

Color resolution: >= 32 Bits per pixel >= 8 Bits

Accelerator: necessary not necessary

Structured and simple development saves time

## Highlights



- Language concept
- Performance
- Networking and communications
- Remote maintenance
- Touch support
- Independence
- Availability
- Support



# Applications



# Quality inspection



	Meldungen: >>> ROBOTER ist im Handbetrieb! <<<						
tation: 1 Nest:						Prüfling Typ: 0260130035	
Merkmale ▼	Merkmal	Einheit	Messwert	TUG	TOG 🔺		
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	2_Widerstand_VW	[mOhm]	0	4900	6110		
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	2_Einstell-Strom	[mA]	0	625	635	Schlecht:	0
	3_Einstell-Druck	[mbar]		2740	2900		
	4_Einstell-Fluss 5 KL-Pruefzeit	[ml/min]	0	12000	17000		
	5_NL-Pruerzeit 6 Pzu-Anz-Fehler	[ms]	- 0	0	17000		
	5_Fzu-Anz-Fehler 7 Pzu-Max-Fehler	[mbar]	0	- 0	0		
	8 KL-Anz-Fehler	[mbar]	- 6	- 0	0		
	9 KL-Max-Fehler	[mbar]	- 0	0	0		
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	11_KL-Stg max ab	[bar/100A]	.00	.00	15.00		
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**Process interface** integrated

Parallel I/O Profibus-DP



Data Network interface integrated

Processor unit m-Pro 400 S





Measuring modules

Handheld nutsetters

Tightening equipment



# Weaving machines







## medical imaging electronics



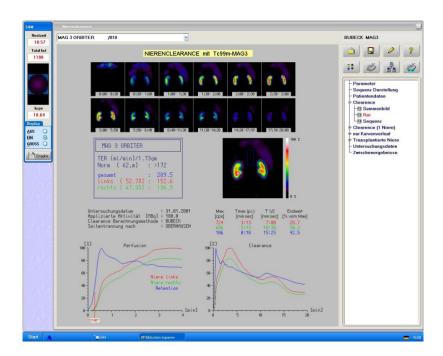


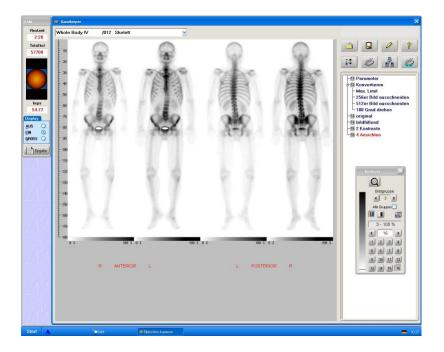












Nuclear medical computer tomographs



## Medical systems

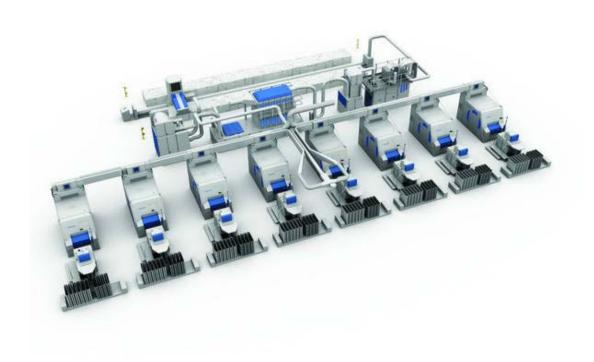




## TRÜTZSCHLER

## Textile machines









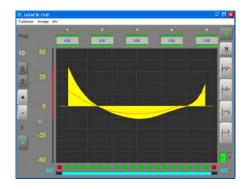


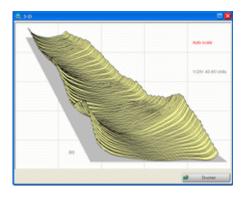
# Measurement and Control Technology

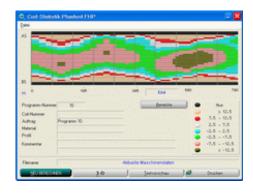












Strip thickness and roll measurement

### Contact list



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