

# Software

Family Model: Platforms, APIs, Applications

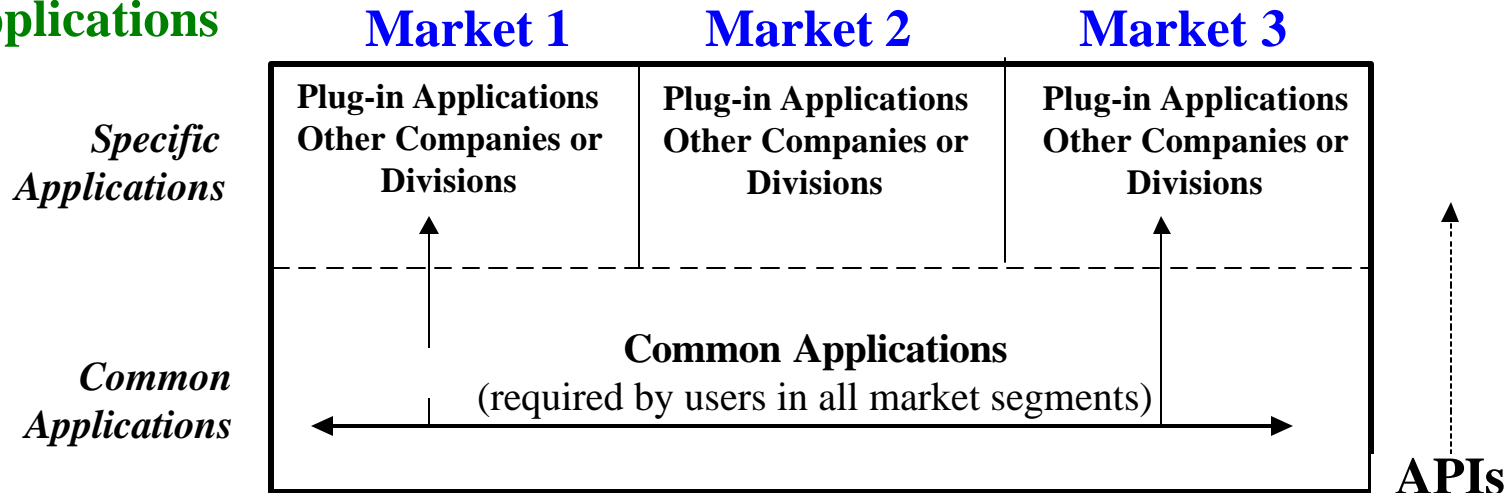
Interfaces Can Ruin or Rule

Market Innovation proceeds Technology Innovation

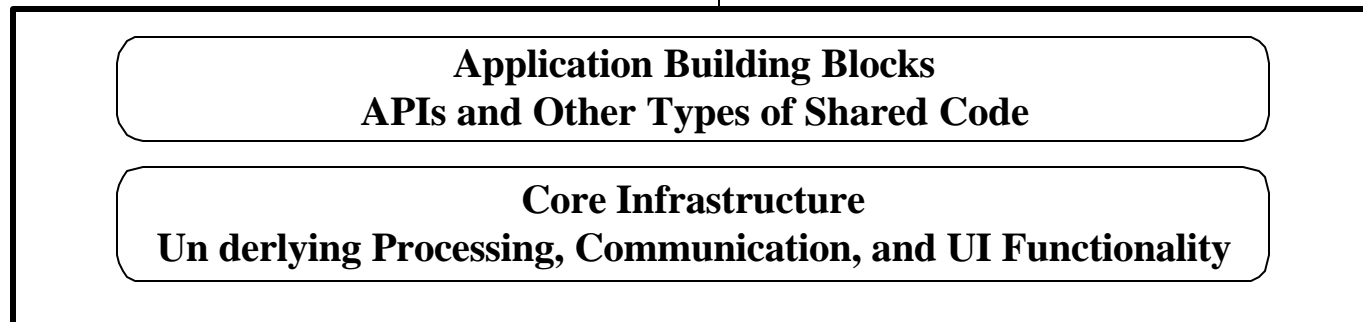
Organization and Process Strategies for Software

# The Framework

## Applications



## Platforms



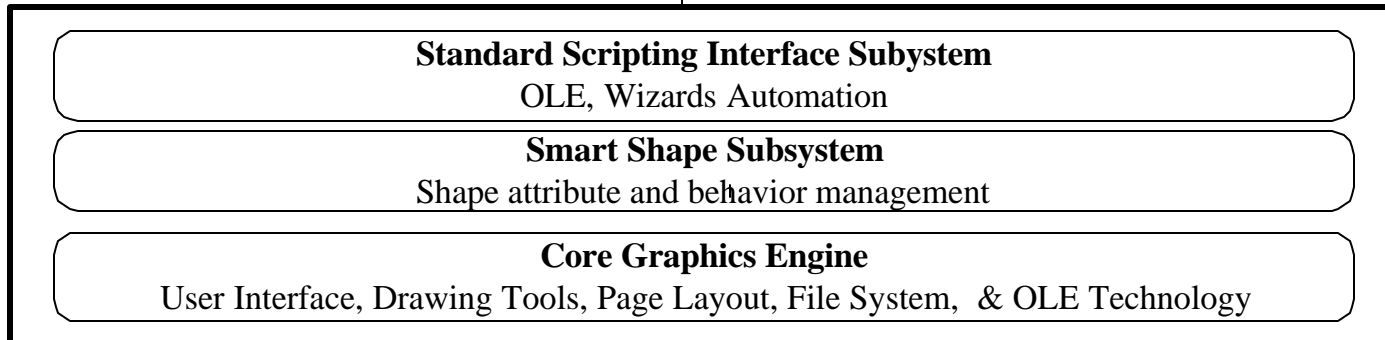
Reference Architecture & Major Subsystems

# Visio Platform Strategy

Building Breadth - Before Microsoft \$1.4B Acquisition

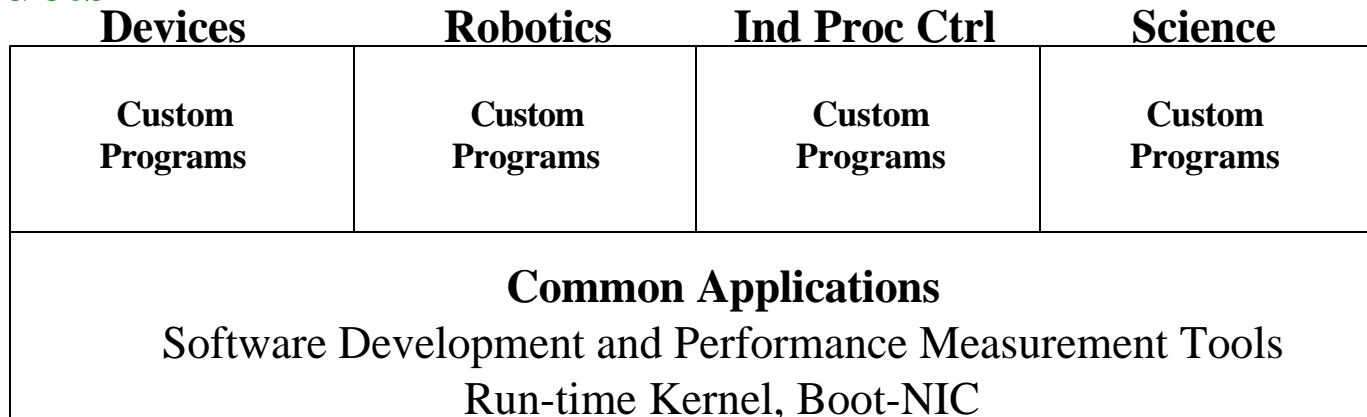
	<b>Premium</b>		<b>Enterprise: Shape Server</b>	
<b>Best</b>		<b>Business Modeler (SAP) \$379</b> <b>Accident Reporting \$79</b> <b>Crime Scene Reporting \$99</b>	<b>Mechanical Engineering \$79</b> <b>Electrical Engineering \$79</b> <b>Software Diagramming \$79</b> <b>Network Diagramming \$79</b>	
<b>Better</b>	<b>Home Planning</b> <b>Landscaping</b> <b>Kids</b>	<b>Marketing Sales Diagrams \$79</b> <b>Space Planning \$79</b>	<b>Biotechnology and Medicine \$79</b> <b>Chemical Engineering \$79</b> <b>Chemistry \$79</b> <b>Petroleum Engineering \$79</b> <b>Advanced Flowcharting \$79</b>	
<b>Good</b>	<b>Basic Chart and Draw</b> <b>Calendars, Flags,</b> <b>Geography</b>	<b>Basic Chart and Draw</b> <b>Org Charting</b> <b>Calendar and Scheduling</b>	<b>Flowcharting</b> <b>Block Diagrams</b>	
	← <b>Visio SE Free</b>	<b>Visio 4.0 \$150</b>	<b>Visio Technical 4.1 \$300</b> →	
	<b>Home</b>	<b>Business</b>	<b>Technical</b>	

**Platform Subsystems**

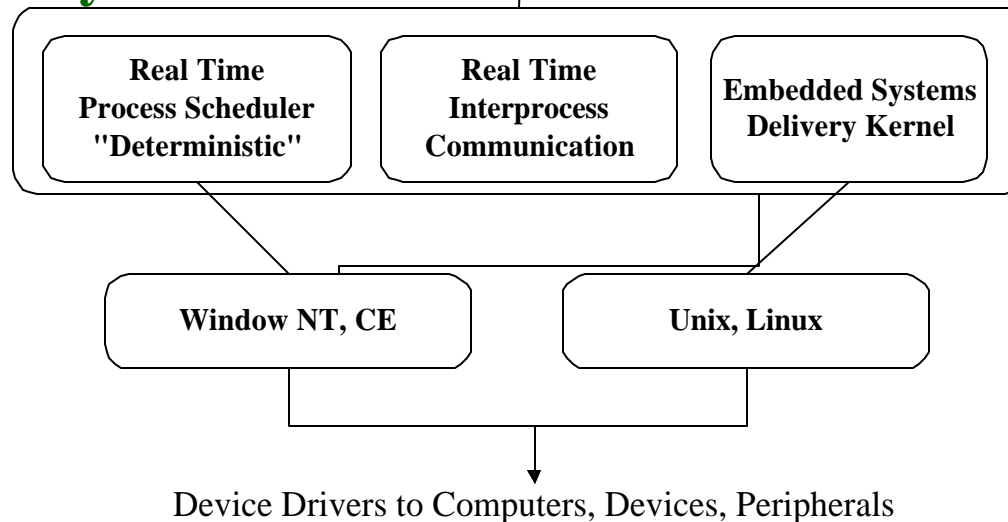


# VenturCom's Platform Strategy

## Products



## Platform Subsystems



**Embedded Systems: Intel, Microsoft, GE Capital investors**  
*Intelligent Connected Equipment*

# Mathworks

Two Platforms (languages, APIs)  
Dozens of Toolboxes, Blocksets

Ubiquity in Education leads to Commercial Market Share

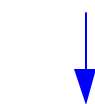
# Subsystem and Interfaces as Shared Platforms

# First Step to Common Code:

## Assess Commonality in Subsystems

Step 1

Step 2



**Monitors**                      **Imaging**                      **CathLab**  
**System 1** **System 2** **System 3** **System 4**    **System 5** **System 6**    **System 7** **System 8**

**Real-time Observations**

**Data Review**

**Documentation**

**Decision Support**

**Workflow Management**

**Database**

**Networks**

**OS**

Unique	Unique	Unique	Unique	Unique	Unique	Unique	Unique
Unique	Unique	Unique	Unique	Unique	Unique	Unique	Unique
Unique	Unique	Unique	N/A	Unique	Unique	Unique	Unique
Unique	Unique	N/A	Unique	Unique	Unique	Unique	Unique
Unique	Unique	N/A	N/A	Unique	Unique	Unique	Unique
Sybase	Sybase	Sybase	N/A	SQL Server	SQL Server	Oracle	Informix
TCP/IP	OS Lan Mgr	TCP/IP	TCP/IP	TCP/IP	TCP/IP	TCP/IP	TCP/IP
NT,Unix	NT	NT	Windows	NT	OS/2	NT	Unix

# Storage Systems

		Current Markets			New Markets	
		Finance	High-Tech	Industrial	Retail	Dot Com
<b>High-Range</b>	Units	168	125	36	70	32
	Annual Growth Rate	20%	35%	25%	30%	5%
	Market Leaders	EMC	EMC	EMC	EMC	EMC
<b>High Mid-Range</b>	Units	250	157	45	88	60
	Annual Growth Rate	38%	42%	20%	45%	30%
	Market Leaders	Compaq	Compaq	Compaq	Compaq	Compaq
<b>Low Mid-Range</b>	Units	281	236	67	132	40
	Annual Growth Rate	35%	40%	15%	40%	25%
	Market Leaders	Compaq	Compaq	Compaq	Compaq	Compaq

## EMC: ECC and Navisphere



# Build Common Subsystems and APIs

## Where Appropriate

## Explicitly Examine Interfaces Between Subsystems

<b>Step 3</b>		Real Time			Data Review			Doc			Dec Sup		
		RT1	RT2	RT3	DR1	DR2	DR3	DC1	DC2	DC3	DS1	DS2	DS3
Real Time	RT1												
	RT2	1											
	RT3	1	1										
Data Review	DR1	1	1	1									
	DR2	1	1	1	1								
	DR3	1	1	1	1	1							
Doc	DC1	1	1	1	1	1	1						
	DC2	1	1	1	1	1	1	1					
	DC3	1	1	1	1	1	1	1	1				
Dec Sup	DS1	1	1	1	1	1	1	1	1	1			
	DS2	1	1	1	1	1	1	1	1	1	1		
	DS3	1	1	1	1	1	1	1	1	1	1	1	
	<b>Sum:</b>	<b>11</b>	<b>10</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	
											<b>Total</b>	<b>66</b>	
<b>Implications of Changing One Major Subsystem: 11 Interface Fixes across 4 Teams</b>													

## Build Common I/Fs, Reduce I/F “Part Count”

		Real Time			Data Review			Doc			Dec Sup			
	RT1	RT1	RT2	RT3	DR1	DR2	DR3	DC1	DC2	DC3	DS1	DS2	DS3	
Real Time	RT1													
	RT2	1												
	RT3	1	1											
Data Review	DR1	1	1	1										
	DR2	1	1	1	1									
	DR3	1	1	1	1	1				Plus				
Doc	DC1	0	0	0	0	0	0			1	New Common I/F			
	DC2	0	0	0	0	0	0	1						
	DC3	0	0	0	0	0	0	1	1					
Dec Sup	DS1	1	1	1	1	1	1	0	0	0				
	DS2	1	1	1	1	1	1	0	0	0	1			
	DS3	1	1	1	1	1	1	0	0	0	1	1		
	Sum:	8	7	6	5	4	3	2	1	1	2	1		
											Total	40		
Implications of Changing One Major Subsystem: 3 Within Group, 1 Across Four Teams														

# Don't Stop!

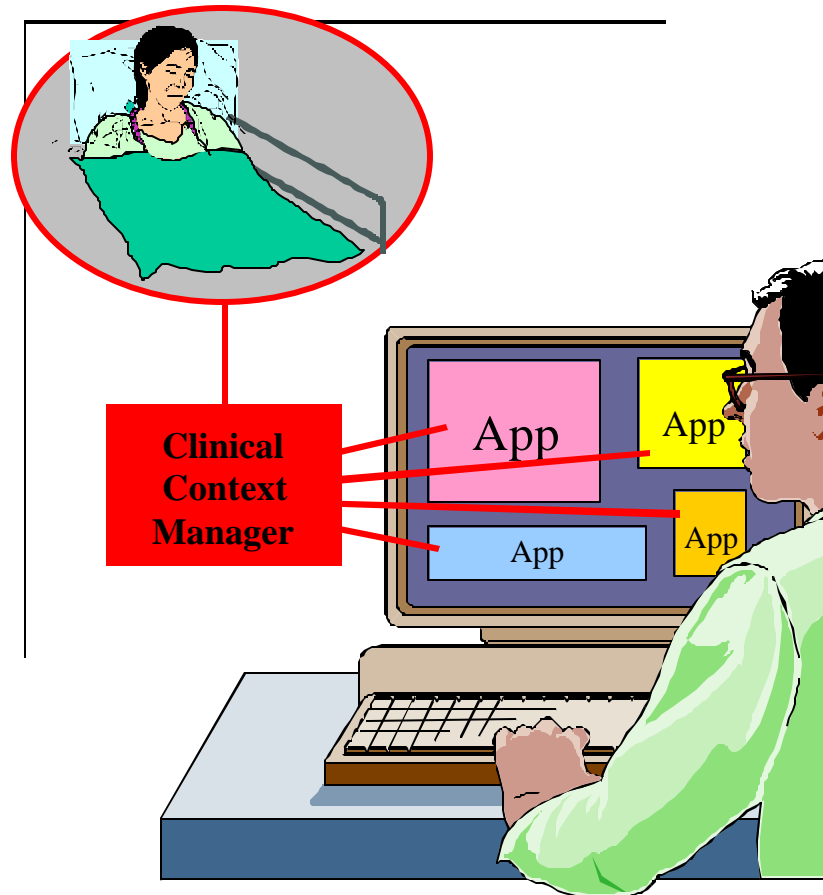
		Real Time			Data Review			Doc			Dec Sup		
	RT1	RT1	RT2	RT3	DR1	DR2	DR3	DC1	DC2	DC3	DS1	DS2	DS3
Real Time	RT1												
	RT2	1											
	RT3	1	1										
Data Review	DR1	0	0	0			Plus						
	DR2	0	0	0	1		1	New Common I/F					
	DR3	0	0	0	1	1							
Doc	DC1	0	0	0	0	0	0						
	DC2	0	0	0	0	0	0	1	1				
	DC3	0	0	0	0	0	0	1	1				
Dec Sup	DS1	1	1	1	0	0	0	0	0	0			
	DS2	1	1	1	0	0	0	0	0	0	1		
	DS3	1	1	1	0	0	0	0	0	0	1	1	
	<b>Sum:</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	
											<b>Total</b>	<b>23</b>	
<b>Getting Better: 66 to 44 to 23 I/Fs to worry about managing</b>													

# It Can Be Habit Forming!

		Real Time			Data Review			Doc			Dec Sup		
	RT1	RT1	RT2	RT3	DR1	DR2	DR3	DC1	DC2	DC3	DS1	DS2	DS3
Real Time	RT1												
	RT2	1			1 New Common I/F								
	RT3	1	1										
Data Review	DR1	0	0	0									
	DR2	0	0	0	1		1						
	DR3	0	0	0	1	1							
Doc	DC1	0	0	0	0	0	0						
	DC2	0	0	0	0	0	0	1		1			
	DC3	0	0	0	0	0	0	1	1				
Dec Sup	DS1	0	0	0	0	0	0	0	0	0			
	DS2	0	0	0	0	0	0	0	0	0	1		
	DS3	0	0	0	0	0	0	0	0	0	1	1	
	<b>Sum:</b>	2	1	1	2	1	1	2	1	1	2	1	
											<b>Total</b>	<b>15</b>	
<b>Getting Better: 66 to 44 to 23 to 15 I/Fs to worry about managing</b>													

Then Again, Most Companies Are Not Organized  
Nor Disciplined Enough to Bite the Bullet  
The Best People Leave to “Do it right” Elsewhere

Sentillion



**The Clinical Context Manager Enables Disparate Applications To  
Automatically “Tune” To Same Patient**

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# RSA

High End Authentication and Security Solutions

Market Innovation and Technology Leverage

# RSA Product Strategy

	Traditional Segments "Who"		New Segments "Who, When, Where"
	Technology Co's OEMs	End-User Co's Banks, Gov't	Enterprise Access Banks, Gov't, Mfts, Hcare
<b>Professional Services</b>	<b>Full integration of tools and end user applications</b> <b>RSA - limited business here, great need</b>		
<b>Hardware + Software</b>	<b>Authentication + Encryption</b> <b>Metal cards w/ circuits</b> <b>(Smart cards now, too)</b> <b>BSAFE API, SecureID (Ace Server)</b>  <b>\$1 b, RSA \$175m, 45% growth</b>		<b>Authentication + Encryption + Access Control</b> <b>SmartCards: Plastic cards w/ ASIC, R/W</b> <b>New BSAFE API, KEON Server (PKI)</b>  <b>\$120m, RSA \$10m, 60% Growth</b>
<b>Software Only</b>	<b>Encryption</b> <b>BSAFE API</b> <b>(Some software token cards for authentication)</b>  <b>\$525m, RSA \$30m, 50% growth</b>		<b>Encryption</b> <b>New BSAFE API</b> <b>(Some software smartcards)</b>  <b>Same as above</b>
	<b>RSA Encryption + Security Dynamics Technology</b> <b>Competitor: Network Associates</b>		<b>Public Key Infrastructure Technology</b> <b>Competitor: Entrust</b>

System Access (Network Admin)

Application and System Access (Sales, HR, Etc)



# RSA Pricing Strategy

	<b>Secure Corp Apps</b>	<b>Security + Access Control</b>
<b>Tokens</b>	<b>Thick Metal + Circuits (Complex Mft)</b> <b>\$50 per card</b> <b>Recurring revenue (break or lost, 3 yrs)</b>	<b>Plastic card + ASIC</b> <b>\$30 per card</b> <b>Recurring revenue (people lose them)</b>
<b>Authentication</b>	<b>SecureID: Ace Server</b> <b>\$50k to \$1m, number of seats</b>	<b>KEON Server</b> <b>same</b>
<b>Encryption</b>	<b>BSAFE API</b> <b>\$500 to \$100k, number of seats</b>	<b>New BSAFE API</b> <b>same</b>

**Client Software no charge**

**Client Software no charge**

# KEON

Remote access, authentication, encryption to systems and applications within systems.

- Public domain standards for access and authentication
- RSA has its own implementation of the standards
- Full development library and run time library (BSAFE)
- Links up with its server software (ACE)

# High Levels of Subsystem Commonality (2000)

	<b>Authentication</b>	<b>Encryption</b>	<b>PKI</b>
<b>Security Server</b>	<b>BSAFE API</b>	<b>BSAFE API</b>	<b>Keon Security Server</b>
<b>Authentication Services</b>	<b>ACE/Server</b>	<b>BSAFE API</b>	<b>ACE/Server, CSSP Server, KSS</b>
<b>Encryption Services</b>	<b>BSAFE API</b>	<b>BSAFE API</b>	<b>BSAFE API</b>
<b>Wireless Services</b>	<b>BSAFE API</b>	<b>BSAFE API</b>	<b>BSAFE API</b>
<b>Data Base Interface</b>	<b>ACE/Server</b>	<b>ACE/Server</b>	<b>Keon Security Server</b>
<b>Certificate Authority</b>	<b>Certs not supported</b>	<b>BSAFE API</b>	<b>RSA Security API, Internal Cert</b>
<b>Management Console</b>	<b>ACE/Server, Keon Desktop</b>	<b>Keon Security Server</b>	<b>ACE/Server, KSS, Keon Desktop, Keon Certificate Server</b>

**Software:** RSA makes APIs based on different standards for Client Apps, and Database-like Server Software.

**Cards/Readers:** Smart Cards with embedded chips that be reprogrammed off the Server.  
Always changing the access key.

# Financials

(In Thousands)		
	1997	2000
<b>Revenue</b>	\$140,630	\$218,124
<b>Cost of Revenue</b>	\$28,704	\$45,161
<b>Gross Margin</b>	\$111,926	\$172,963
<b>Operational Expenses</b>	\$91,977	\$154,844
<b>One Time Charges</b>	\$0	\$11,350
<b>Operating Income</b>	\$19,949	\$6,769
<b>Interest Income</b>	\$6,273	\$10,007
<b>Investment Income</b>	\$4,264	\$285,952
<b>EBIT</b>	\$30,486	\$302,728
<b>Revenue from Trad Mkt</b>	<b>100%</b>	<b>80%</b>
<b>Market Growth Rates</b>	<b>Trad: 45%</b>	<b>New: 60%</b>