

# ARTIFICIAL INTELLIGENCE PAST, PRESENT AND FUTURE: My point of view



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# WHY AI SUCCEEDED IN THE 80 's / early 90 's



Examples: SACHEM, RAMSES, METAPEDIA ... multi M€ in the 80's

Hardware was slow and expensive

Hardware and systems were valuable professional and industrial assets  
which had to be profitable through ambitious applications

The situation was stable (... and boring)  
in Computer Science: OS, Databases, C, C++

IT WAS TIME TO DO MORE EXCITING THINGS  
THAN SOFTWARE ENGINEERING  
WITH COMPUTERS

**Japanese Fifth Generation Computing Program was key**

# WHY AI vanished in the early 90 'S



**Economical crisis**

**AI was an expensive way to save money**

**Hardware was slow and expensive (bis)**

**AI applications did not look different for the user !**

**AI kept fighting *and losing* against Software Engineering**

**AI NEEDED HUMAN EFFORT, DISCIPLINE, CONTINUITY AND INTELLIGENCE**

**RESEARCHERS NOT INTERESTED IN EVERYDAY LIFE APPLICATIONS**

**Natural Language / Voice Processing did not deliver**

# WHY AI IS behind the scene SINCE 10 YEARS

**TOO MANY THINGS HAPPENED:  
IN HARDWARE  
IN INTERNET / EMAIL  
IN MUSIC / PHOTO / VIDEO**

**NO MORE TIME, MONEY, EXCITATION, DREAM  
WAS LEFT FOR THINGS LIKE AI**

**VERY FEW ENGINEERS, COMPUTER SCIENTISTS WERE LEFT FOR AI  
(The bored ones went to Open Source development)**

**Accelerated Business Tempo  
did not encourage  
intelligence (even artificial)**

**WE ARE NOT INTELLIGENT ENOUGH  
TO BUILD ARTIFICIAL SYSTEMS  
AS INTELLIGENT AS WE ARE**

**INTEL HAS PROBLEMS WITH MOORE 'S LAW**

**DEFENCE, INTELLIGENCE AND HOMELAND SECURITY  
DEMAND A NEW GENERATION OF INFORMATION PROCESSING SYSTEMS**

**WESTERN COUNTRIES MUST FIND NEW DOMAINS OF ACTIVITY TO SURVIVE**

**Lisbon European Union Objectives (March 2000):**

**« Become the most competitive knowledge-based society in the world in 2010 »**

**What do we have else to improve information processing ?**

# IDELIANCE: A FRUIT OF THE AI WINTER

**1993: a *personal* tool for professional knowledge management**

**Choice:**

**Build a personal Semantic Nets Editor  
(Ako Personal Semantic Web *avant la lettre*)**

**Eliminate: programming, modelling, databases, document  
Structure emerges *a posteriori* from data**

**Keep only the Representation part of AI (no inference)**

**Main designers: S. Le Bars, J. Rohmer  
Main developpers: S. Jean, D. Poisson**

**2000: Multiusers Web Server**



**NEXT GENERATION AI APPLICATIONS**

**MUST BE DEVELOPPED**

**BY END USERS THEMSELVES**

# FUTURE: EXTENDING IDELIANCE APPROACH

## OVERCOMING CURRENT AI LIMITATIONS

IMPLIES MORE EFFORT FROM THE END USERS, ***NOT*** FROM ENGINEERS

### FORGET THE Soft. Eng. APPROACH:

« just click, and we (*software and knowledge engineers*) take care of the rest !»

### DEVELOP A NEW LANGUAGE *TRULY SHARED* BY MAN AND MACHINE

Make social experiments using this language  
(e.g. in the defence and security community)

### Useful references for the Future:

1491: Phoenix seu artificiosa memoria. *Pietro Tommai (Pierre de Ravenne)*

1591: De imaginum signorum et idearum compositione. *Giordano Bruno*

1629: Lettre à Mersenne. *René Descartes*

1666: Dissertatio de arte combinatoria. *G.W. Leibnitz*