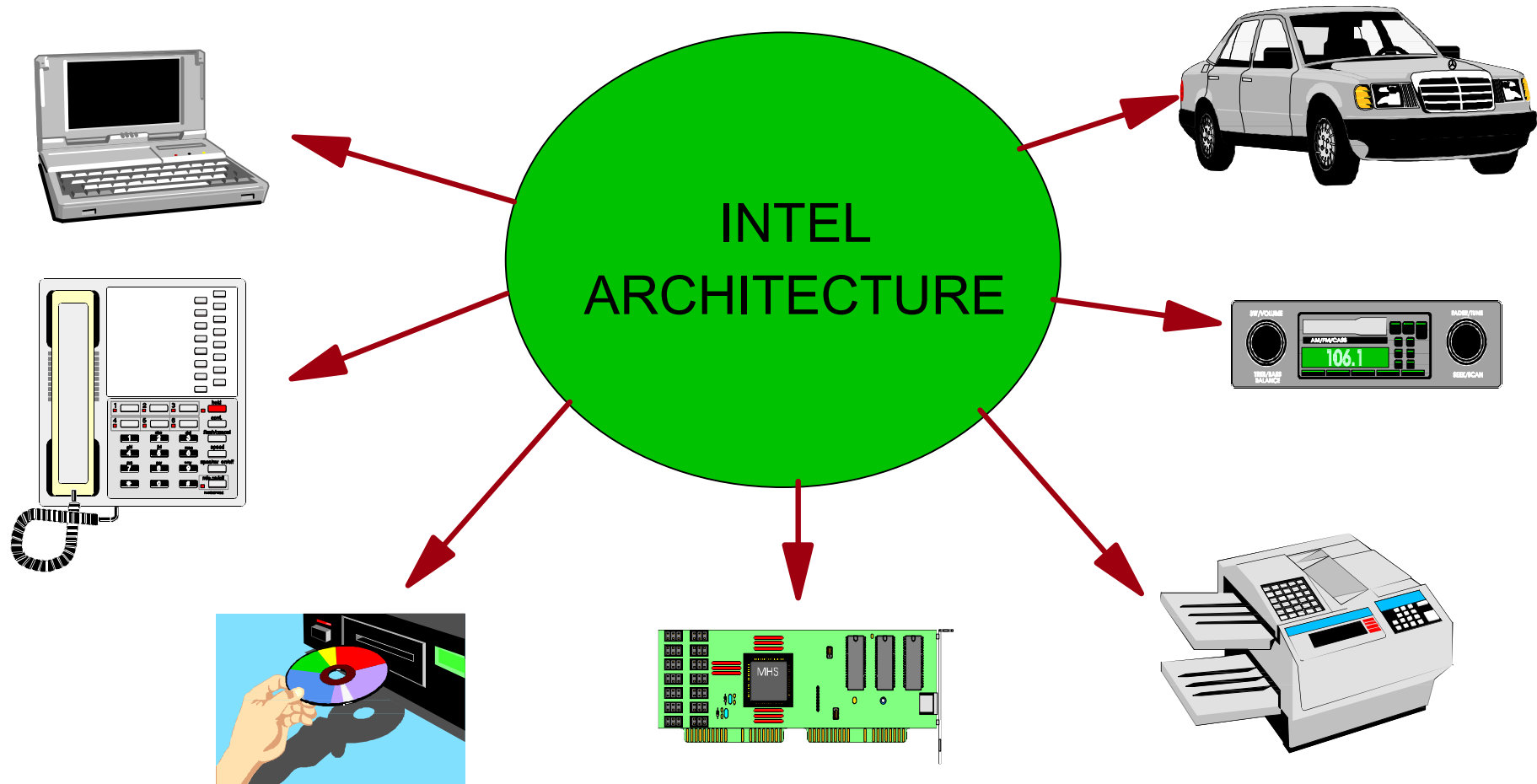# TEMIC Semiconductors

MATRA MHS

C 251   8 bit microcontroller family

Etienne BENETEAU   Product Marketing
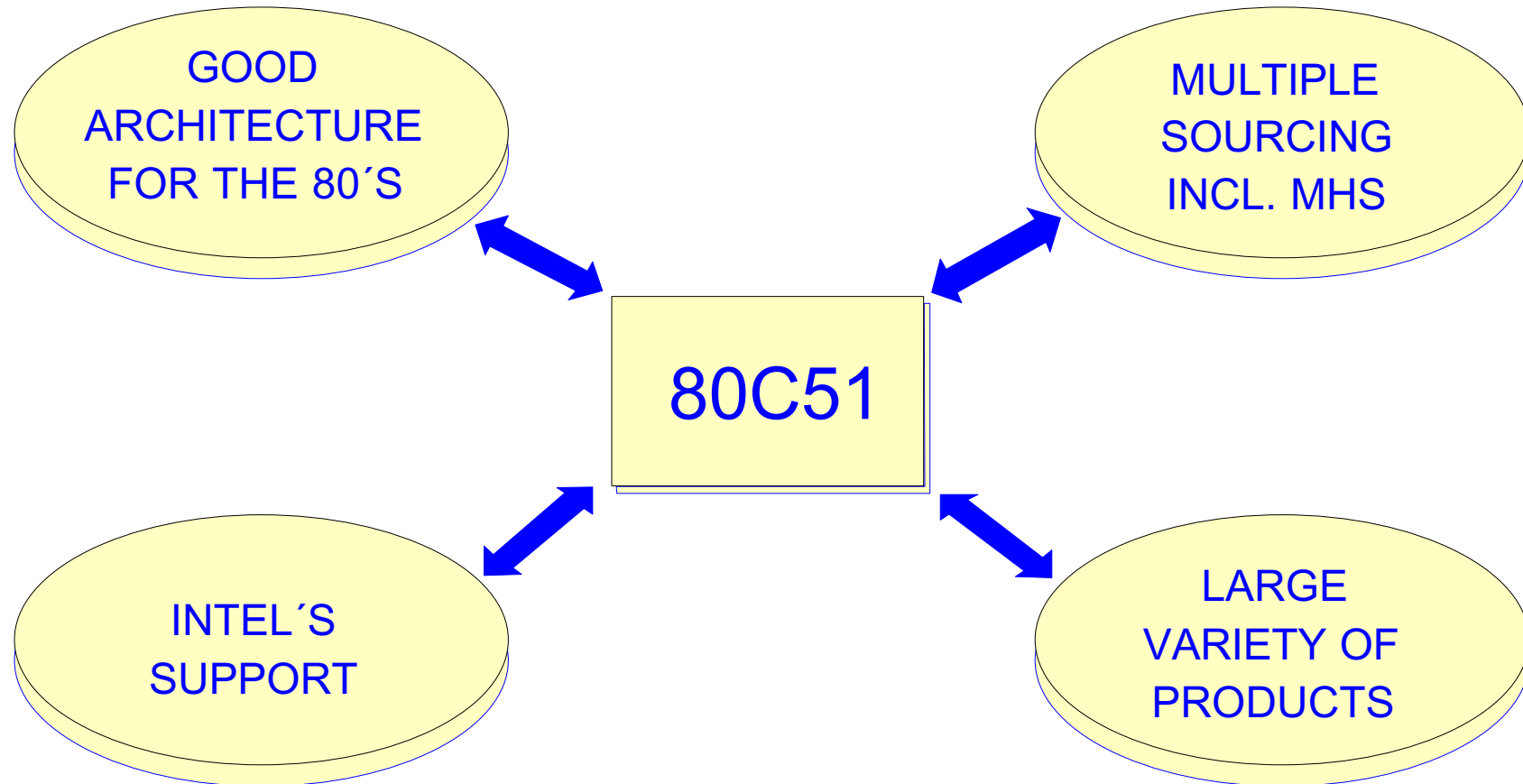
November 1994

A Company of AEG Daimler-Benz Industrie

THE MICRONCONTROLLER IS USED EVERYWHERE

INTEL
ARCHITECTURE

WHY WAS THE C51 FAMILY SO SUCCESSFUL

GOOD
ARCHITECTURE
FOR THE 80´S

MULTIPLE
SOURCING
INCL. MHS

80C51

INTEL´S
SUPPORT

LARGE
VARIETY OF
PRODUCTS

NEW REQUIREMENTS FOR THE 90´S AND BEYOND

- HIGHER PERFORMANCES TO SUPPORT SOPHISTICATION OF EQUIPMENT

- EXTENDED ADDRESSSING SPACE

- EASIER PROGRAMMING WITH "C" LANGUAGE

- TIME-TO-MARKET WITH OWN SPECIFICATION

- LESS POWER CONSUMPTION AND NOISE

- RE-USE OF EXISTING CODE DUE TO BIG DEVELOPMENT INVESTMENTS AND SOFTWARE QUALIFICATION

- SYSTEM COST REDUCTION

C 251, THE SUPER 8-BIT FAMILY

NEED
TO
KNOW
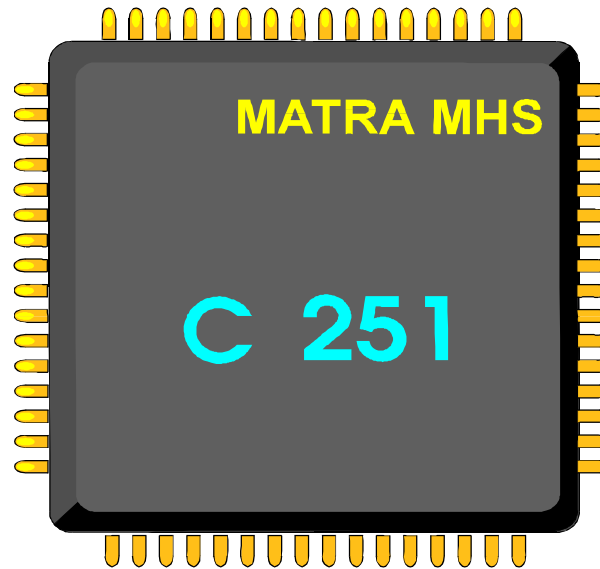
MATRA MHS

C 251

THE NEW MICROCRONTROLLER GENERATION

PARTNERSHIP WITH INTEL

INTEL

TEMIC
MATRA MHS

PRODUCT POSITIONING

POWER

16-BIT

C 251

BIG SAVINGS

$5

8-BIT

C 51
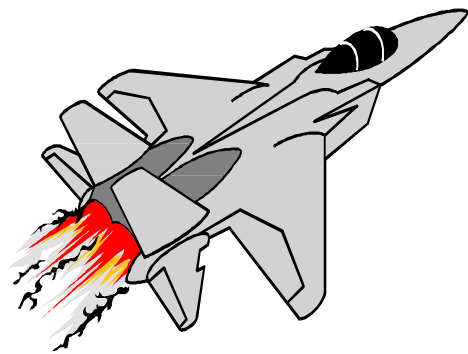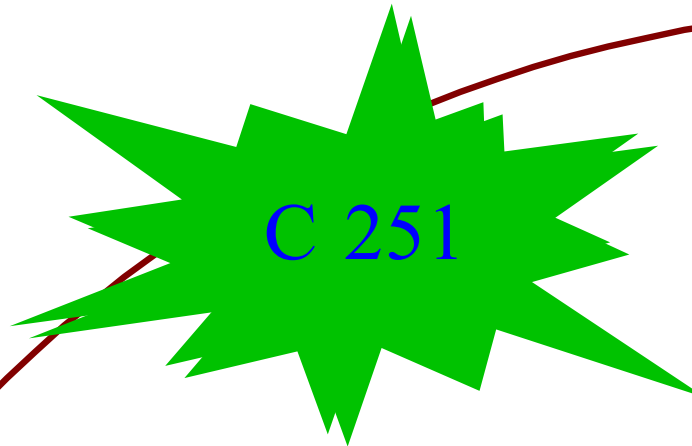
TARGETS

A pplication
S pecific
S tandard
P roduct

ADVANCED
COMMUNICATION
SYSTEMS

Telecom +
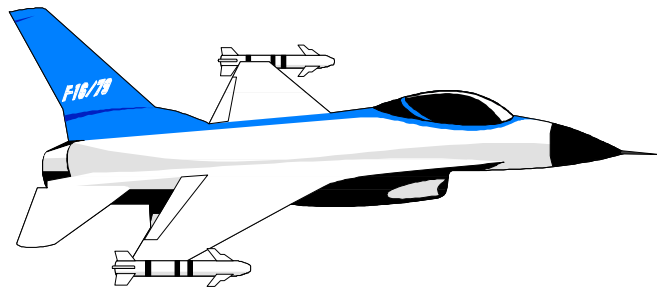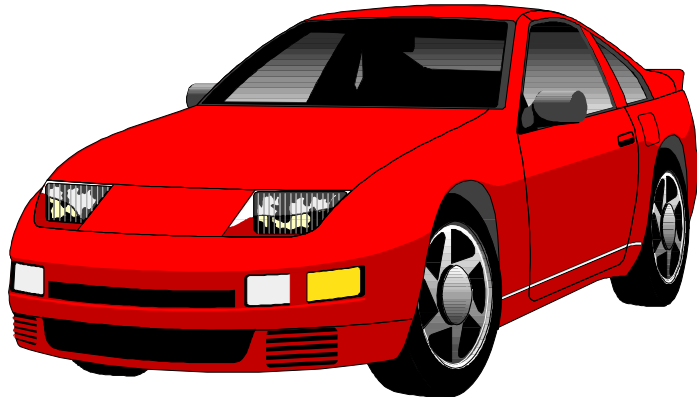Computer peripherals

AUTOMOTIVE

PERFORMANCE HIGHLIGHTS

**5 TO 15 TIMES FASTER
THAN THE 80C51 MICROCONTROLLER**

**HIGH INSTRUCTION THROUGHPUT
AT LOW CLOCK SPEED**

BENEFITS : POWER CONSUMPTION AND RFI REDUCED
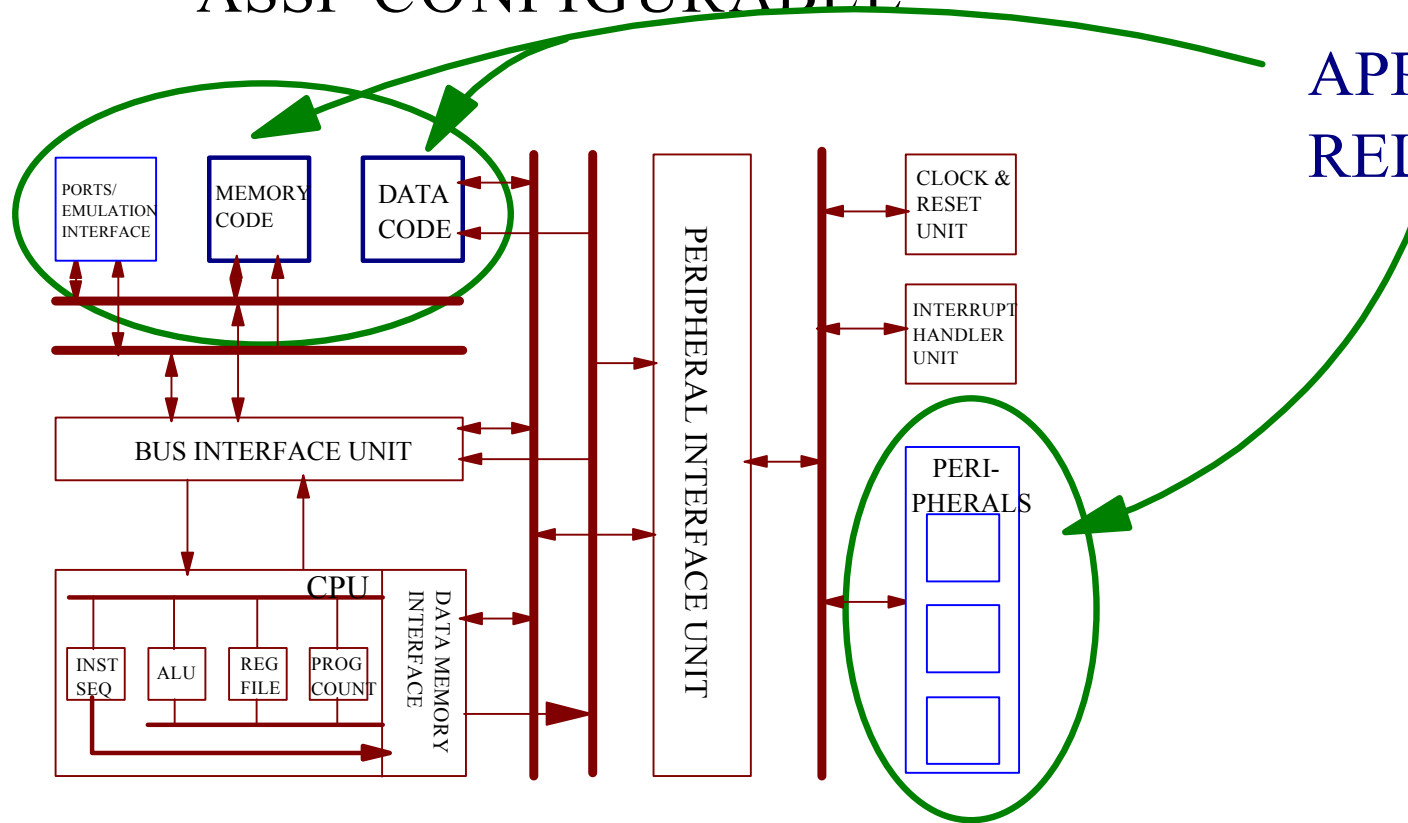
CPU IMPROVEMENTS

VERY FAST: 2 CLOCK CYCLES PER STATE

3-STAGE PIPELINE ARCHITECTURE

16-BIT INTERNAL CODE BUS

C 251   ASSP CONFIGURABLE

APPLICATION
RELATED

PORTS/
EMULATION
INTERFACE

MEMORY
CODE

DATA
CODE

CLOCK &
RESET
UNIT

INTERRUPT
HANDLER
UNIT

PERIPHERAL INTERFACE UNIT

PERI-
PHERALS

BUS INTERFACE UNIT

CPU

DATA MEMORY INTERFACE

INST
SEQ

ALU

REG
FILE

PROG
COUNT

ASSP STRATEGY BASED ON LARGE FLEXIBILITY

DEFINE YOUR SYSTEM

TEMIC

THIRD PARTY DEVELOPMENT TOOLS

WORLDWIDE REPRESENTATION
(Keil, BSO tasking, Metalink, Nohau...)

&

COMPLETE PACKAGE OF TOOLS

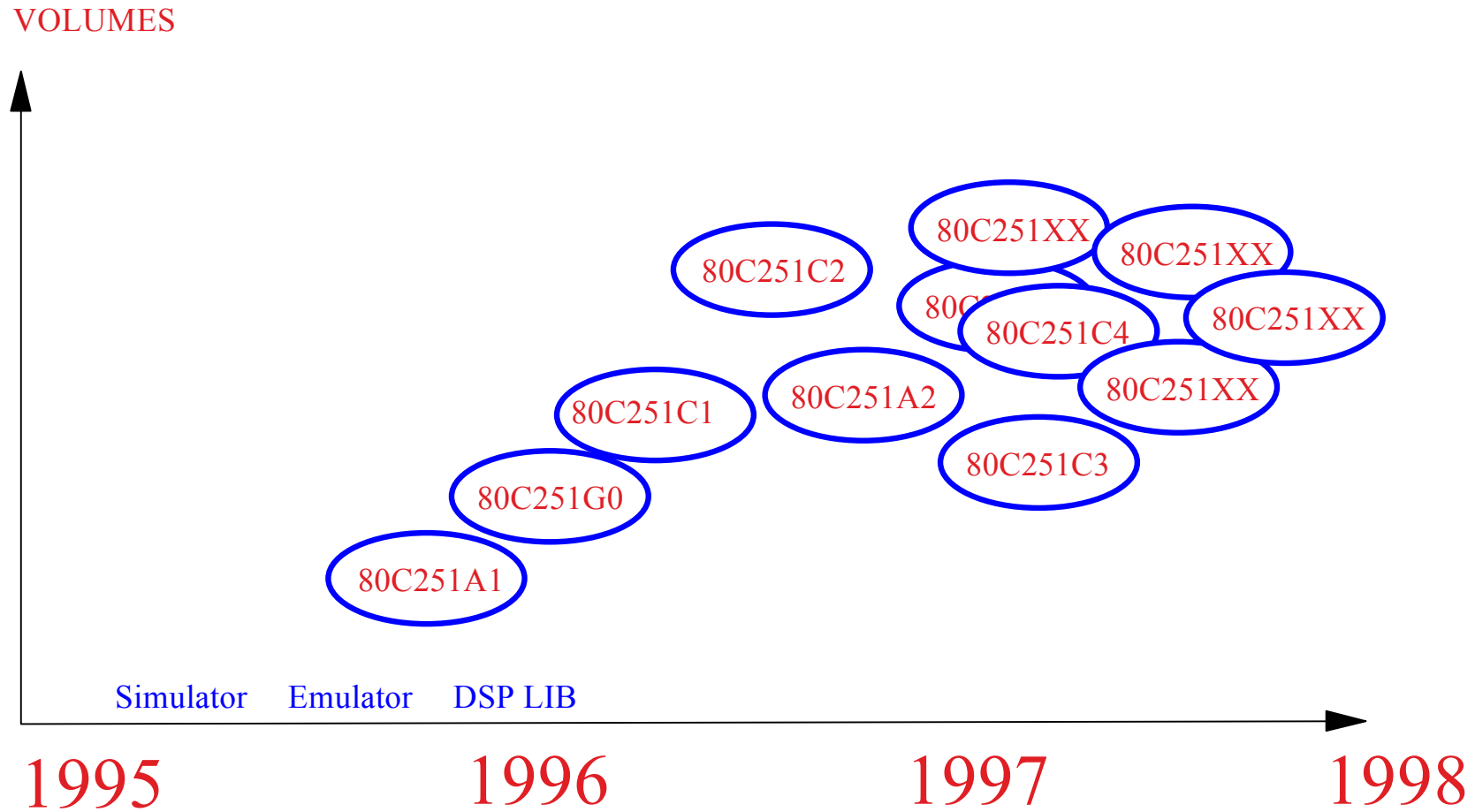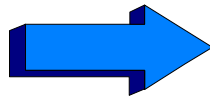|	
SIMULATOR	Available
EMULATORS	Available
ASSEMBLER	Available
C - COMPILER	Available
ROM MONITOR	Q4/95

C 251   ROADMAP

C 251 — SOLE SOLUTION

- With best cost/performance ratio

- To address applications requested on the market

- To support "C" language programming with efficiency

- With code compatibility to preserve investments

➡ FOLLOW-IT AND DESIGN-IN