

# SMALLTALK-80

FEBRUARY 1981

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# WHAT IS SMALLTALK-80?

AN INTEGRATED ENVIRONMENT FOR  
SPECIFYING, IMPLEMENTING, AND DEBUGGING  
COMPLEX SOFTWARE APPLICATIONS

# WHAT IS SMALLTALK-80?

- \* DEVELOPED AT XEROX PARC
- \* EVOLVED OVER 10 YEAR PERIOD
- \* RESEARCH AND DEVELOPMENT TOOL:
  - + HUMAN-COMPUTER INTERFACE
  - + GRAPHICS
  - + PERSONAL COMPUTING

# WHAT IS SMALLTALK-80?

## \* WHY "GO PUBLIC"?

- + PUBLICIZE RESEARCH ACTIVITIES
- + EGO GRATIFICATION
- + TANGENTIAL TO MAINSTREAM OF XEROX PRODUCTS

CO-

TEK

HP

intel - 432 G. Ross

Apple

DEC

AMD

# WHAT IS THE SMALLTALK-80 PROJECT?

\* INVESTIGATE THE APPLICABILITY OF  
SMALLTALK-80 WITHIN THE DA DIVISION

\* 3 PHASES:

- I - BOOK REVIEW
- II - EXPERIMENTAL IMPLEMENTATION
- III - INVESTIGATION AND EVALUATION

# SMALLTALK-80 PROJECT: PHASE I

\* BOOK REVIEW FOR XEROX

\* 12 CHAPTERS:

+ 10 RECEIVED  
+ 9 REVIEWED

\* 5 PEOPLE:

+ L. KATZ

+ P. McCULLOUGH

+ A. WIRFS-BROCK

GCS/DAD

R. SAMCO - TEK LABS

R. REED - T&D

\* BEGAN SEPT. 1980

# SMALLTALK-80 PROJECT: PHASE II

- \* EXPERIMENTAL IMPLEMENTATION

- \* OBJECTIVES:

  - + PRODUCE A WORKING EXPERIMENTAL IMPLEMENTATION OF SMALLTALK-80

  - + VERIFY ACCURACY AND COMPLETENESS OF DOCUMENTATION

  - + PROVIDE FEEDBACK TO XEROX

- \* BEGINS NOW (FEB./MAR. 1981)

## SMALLTALK-80 PROJECT: PHASE III

- \* INVESTIGATION AND EVALUATION
- \* ASCERTAIN THE APPLICABILITY OF SMALLTALK-80 TECHNOLOGY TO THE DA DIVISION
- \* BEGINS APPROX. 1 YEAR FROM NOW (FEB. 1982)

# BENEFITS TO DAD

- \* TECHNOLOGY TRANSFER:

- + DETAILED INFORMATION
- + HANDS-ON EXPERIENCE
- + ADVANCED PERSONAL COMPUTER AND GRAPHICS SYSTEM
- + UNAVAILABLE BY OTHER MEANS

- \* LEVERAGE XEROX PARC RESEARCH TEAM'S EXPERIENCE (ABOUT 10 YEARS) INTO ADVANCED DA WORKSTATION

# RESOURCE ESTIMATE

\* PEOPLE: 3 SW 8-12 MONTHS  
          2 HW 6-8 MONTHS

\* HARDWARE POSSIBILITIES:

+ 68000 BOARD BUCKET  
+ 4041  
+ 4112

\* BIT-MAP DISPLAY

\* MASS STORAGE

# FUTURE DIRECTIONS

- \* NUCLEUS OF DA WORKSTATION
- \* LOCAL NETWORKS
- \* IC DESIGN SYSTEM
- \* SIMULATION
- \* SMALLTALK-80 "ENGINE"
- \* INSTRUMENT CONTROLLER
- \* GRAPHICS LANGUAGE

# EXPERIMENTAL IMPLEMENTATION

- \* INTEGRATED ENVIRONMENT FOR SPECIFYING, IMPLEMENTING AND DEBUGGING COMPLEX SOFTWARE APPLICATIONS
- \* TEK-BUILT HARDWARE