

CCT490: Week 2

Free and Open Source Software ~~Today~~

(actually, we'll start with the 1940s)

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University of Toronto

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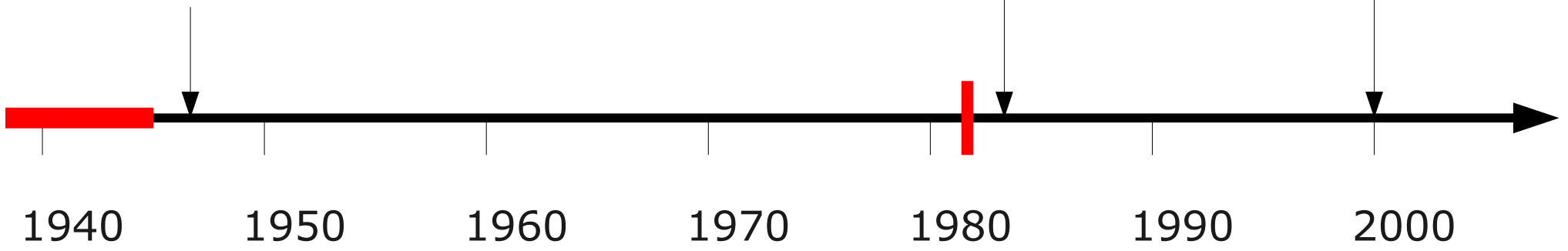
What is “Open Source Software”?

And what about “Free Software”?

1946 - ENIAC

1946 - The GNU Project

1999 - RedHat IPO



1940

1950

1960

1970

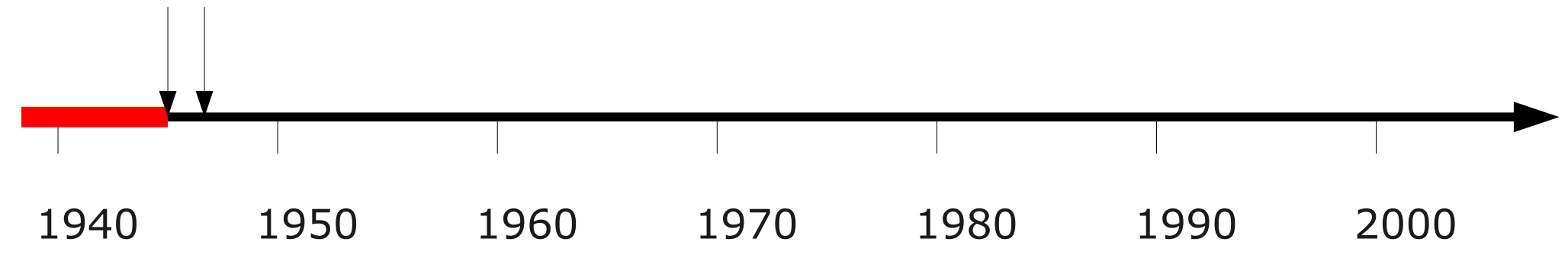
1980

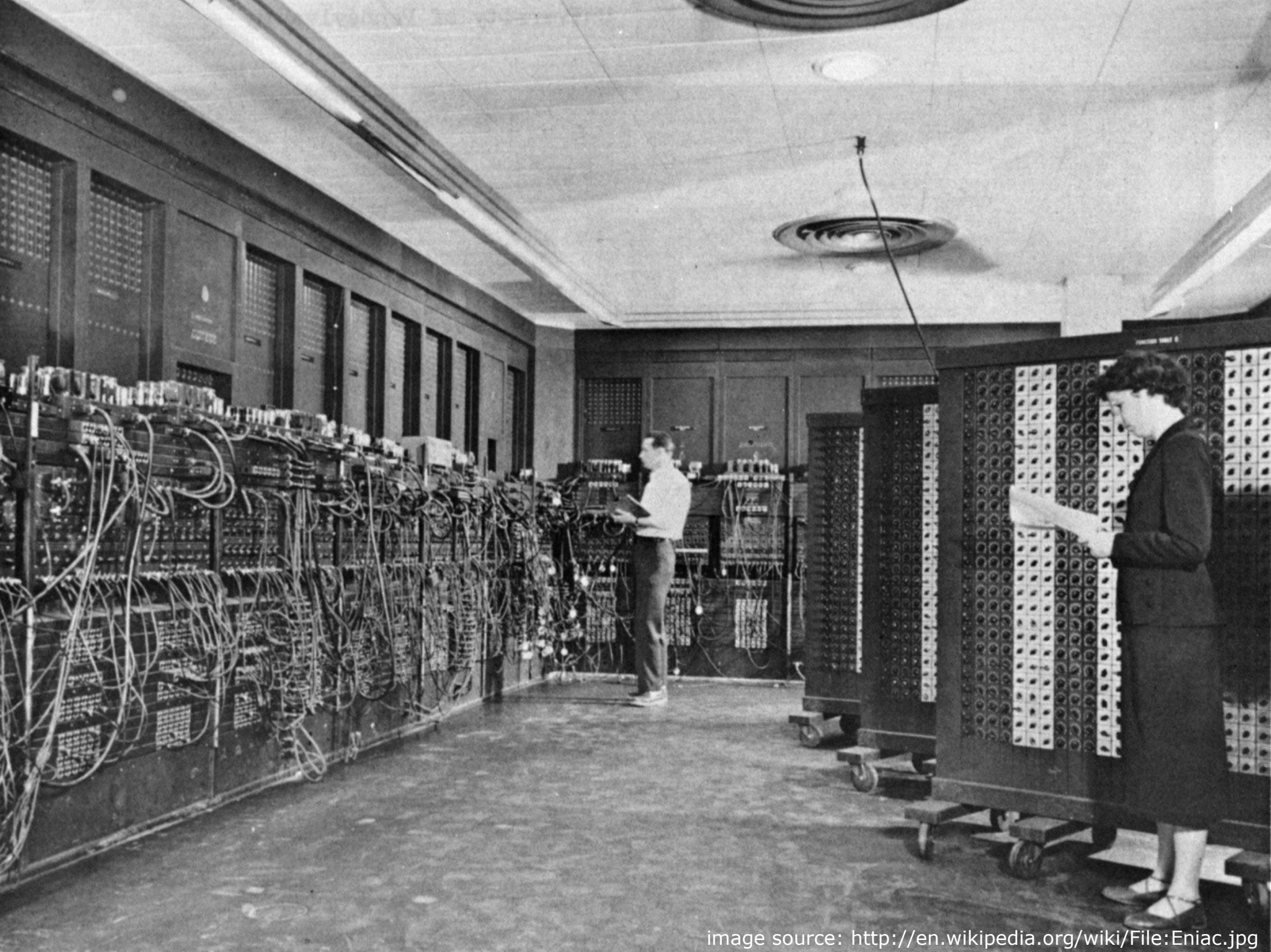
1990

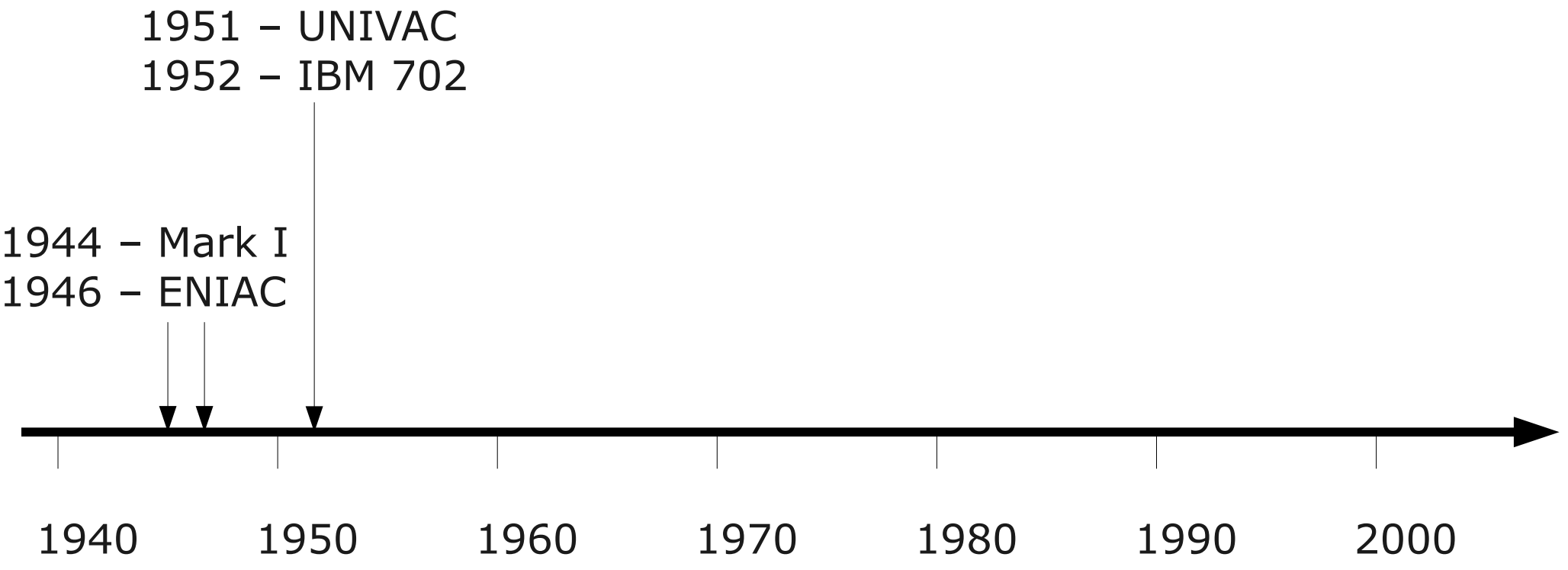
2000



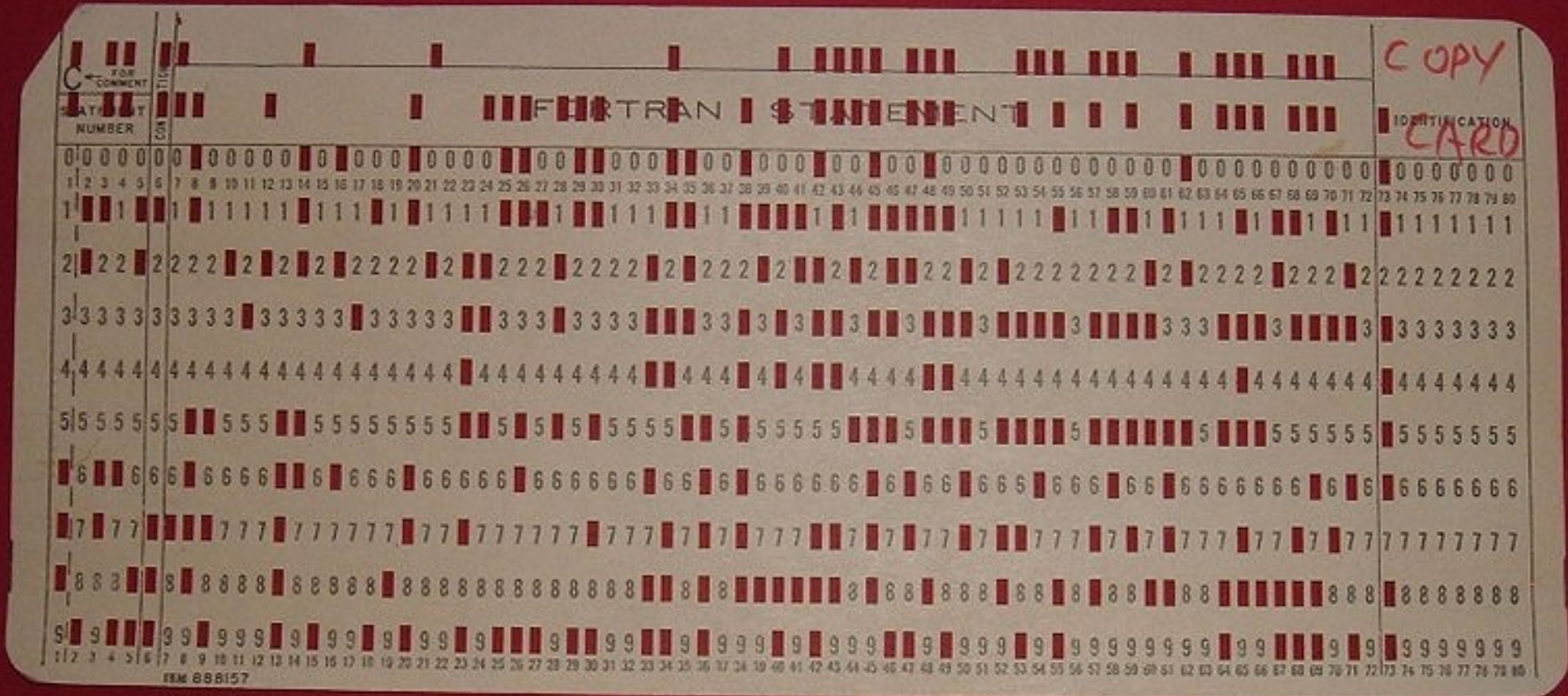
1944 - Mark I
1946 - ENIAC







"Stored Program Computer"



IBM 704



IBM Share

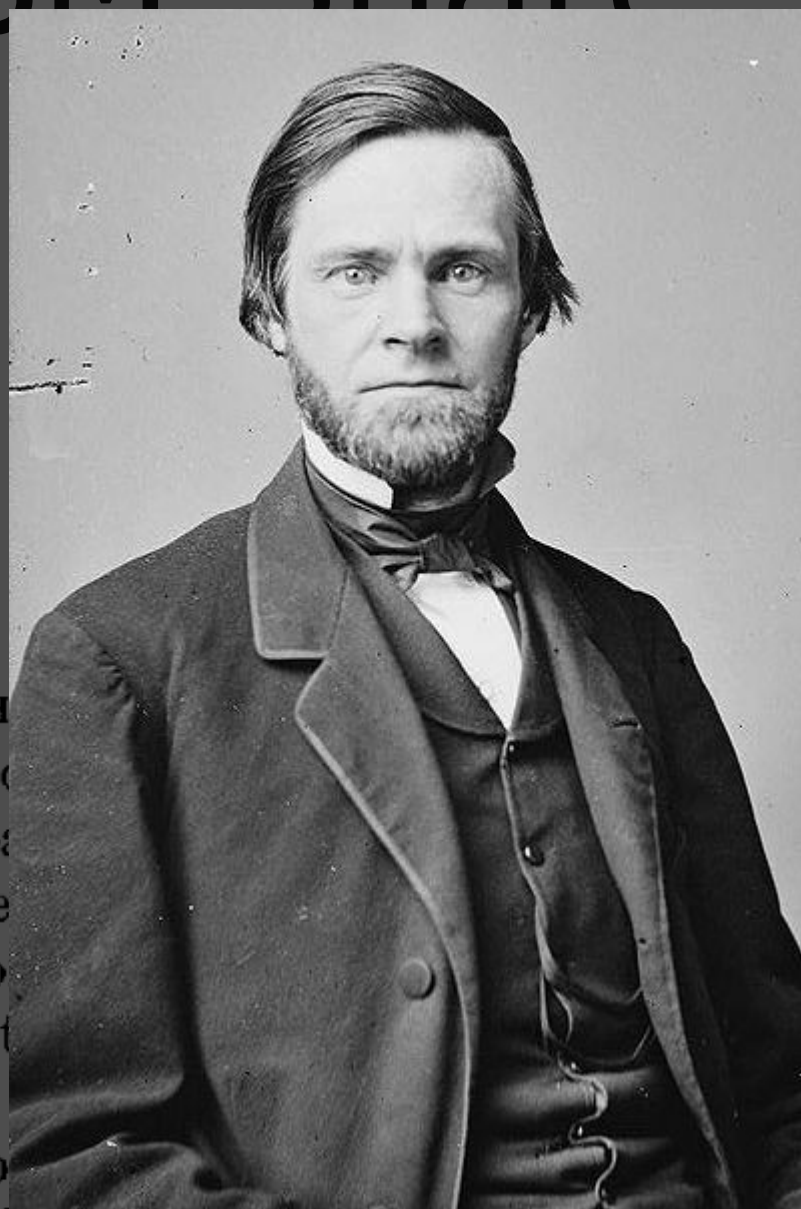
The SHARE 709 System: A Cooperative Effort*

DONALD L. SHELL

General Electric Co., Cincinnati, Ohio

SHARE was created in August 1955. From the beginning, its aim has been to reduce redundant effort among various users of the IBM 704, insofar as the preparation of commonly used routines is concerned. The organization has operated on a cooperative basis—establishing a standard language of communication and exchanging a large number of programs which form the tools for effectively using the computer. This standard language of communication is that used in the SHARE Assembly Program, which was developed by United Aircraft Corporation and patterned after the first such program for the 704 which was developed under the writer's direction by the General Electric Company. This, in turn, was patterned to a considerable extent after the "Comprehensive System" which was pioneered at M. I. T. for use on the Whirlwind computer.

IBM Share



...: A Cooperative Effort*

D. L. SHELL

Co., Cincinnati, Ohio

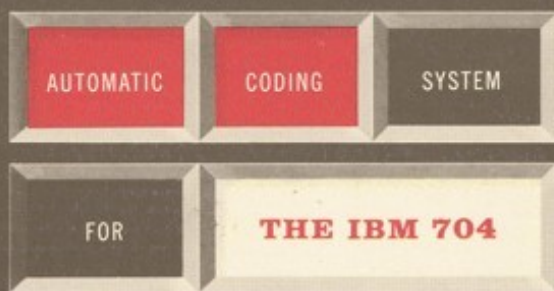
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Corp

developed under the writer's direction by the General Electric Company. This, in turn, was patterned to a considerable extent after the "Comprehensive System" which was pioneered at M. I. T. for use on the Whirlwind computer.

From the beginning, its aim has been to assist users of the IBM 704, insofar as the standard language of communication is concerned. The organization has been pushing a standard language of communication consisting of a number of programs which form the tools for the standard language of communication is that which was developed by United Aircraft as the first such program for the 704 which was

PROGRAMMER'S REFERENCE MANUAL

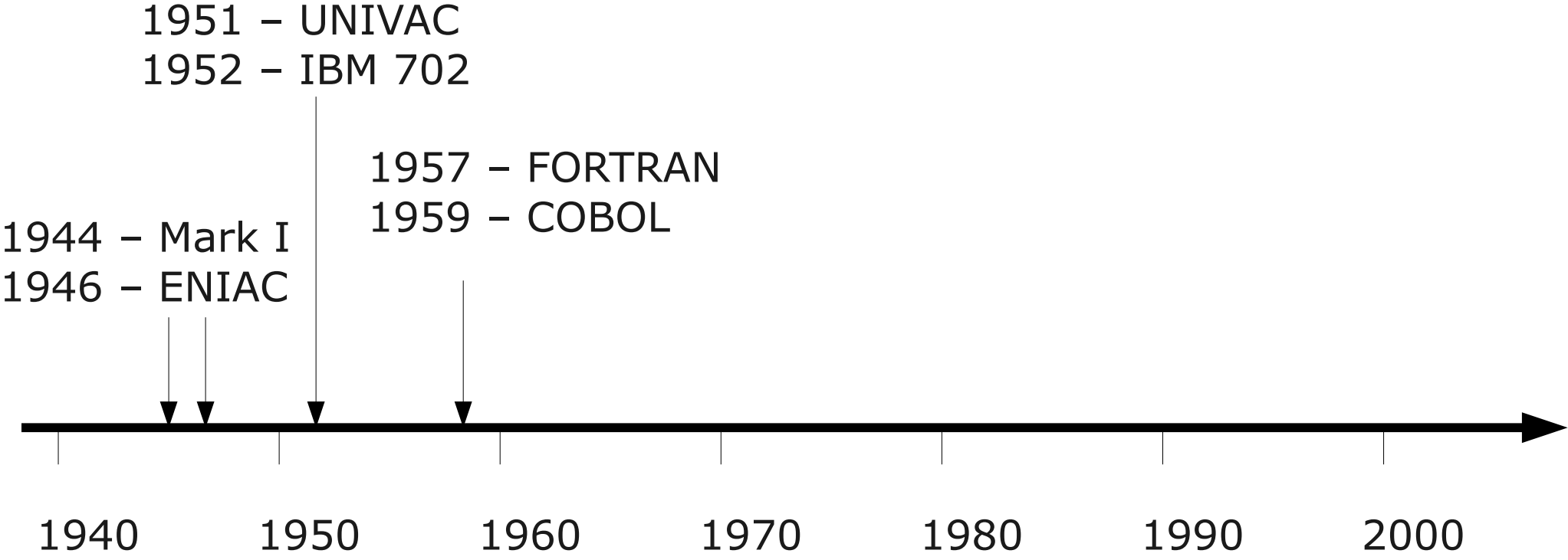
Fortran



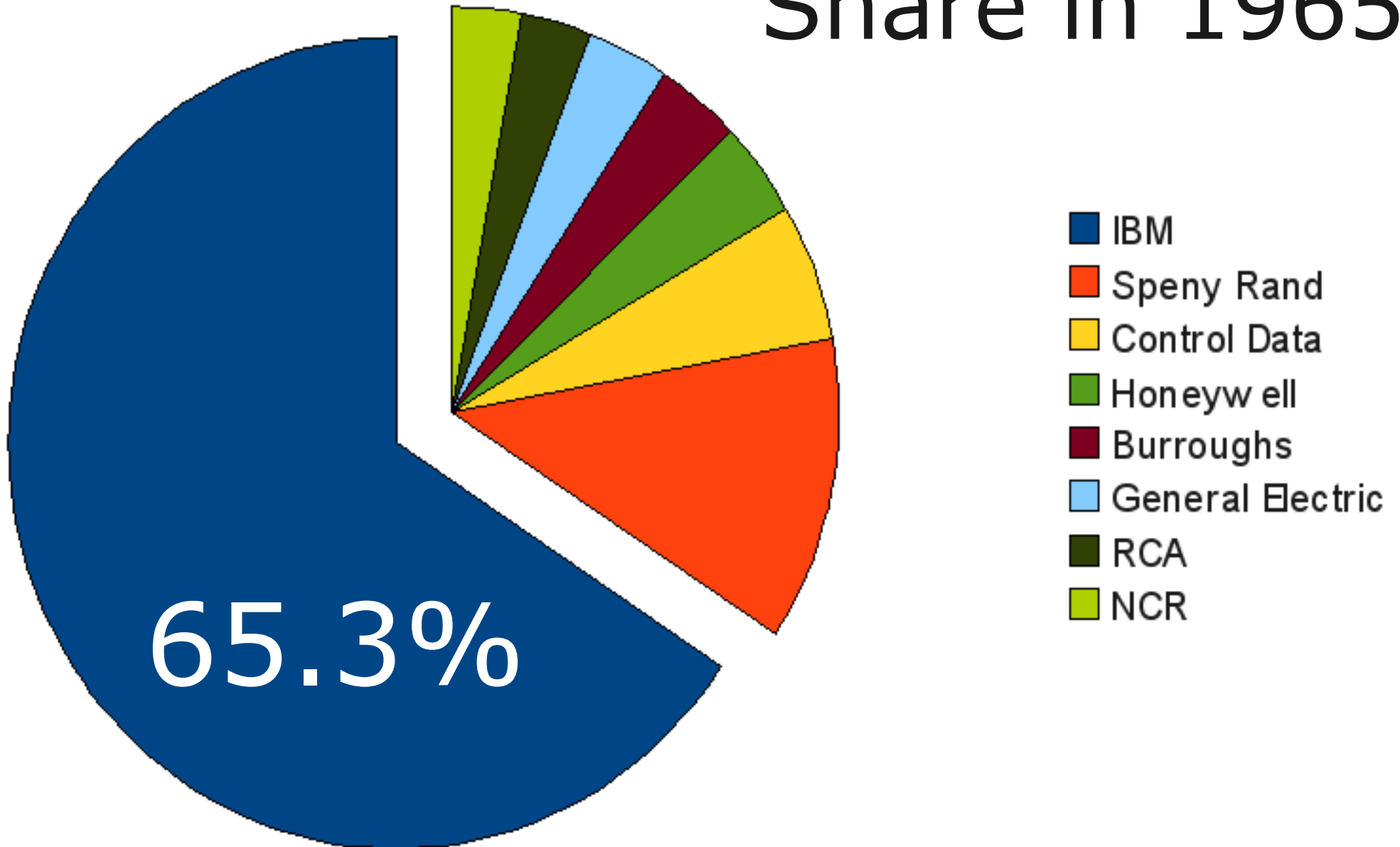
Example of a Fortran Program

The following brief program will serve to illustrate the general appearance and some of the properties of a FORTRAN program. It is shown as coded on a standard FORTRAN coding sheet.

C ← FOR COMMENT		CONTINUATOR	FORTRAN STATEMENT	IDENTIFICATION		
STATEMENT NUMBER				72	73	80
1						
	C		PROGRAM FOR FINDING THE LARGEST VALUE			
	C	X	ATTAINED BY A SET OF NUMBERS			
			BIGA = A(1)			
			DO 20 I = 2,N			
			IF (BIGA - A(I)) 10, 20, 20			
			BIGA = A(I)			
			CONTINUE			
10						
20						



Computer Market Share in 1965



Computer Market Share in 1965



- IBM
- Speny Rand
- Control Data
- Honeyw ell
- Burroughs
- General Electric
- RCA
- NCR

AUTOFLOW (1964)

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for
Christmas?



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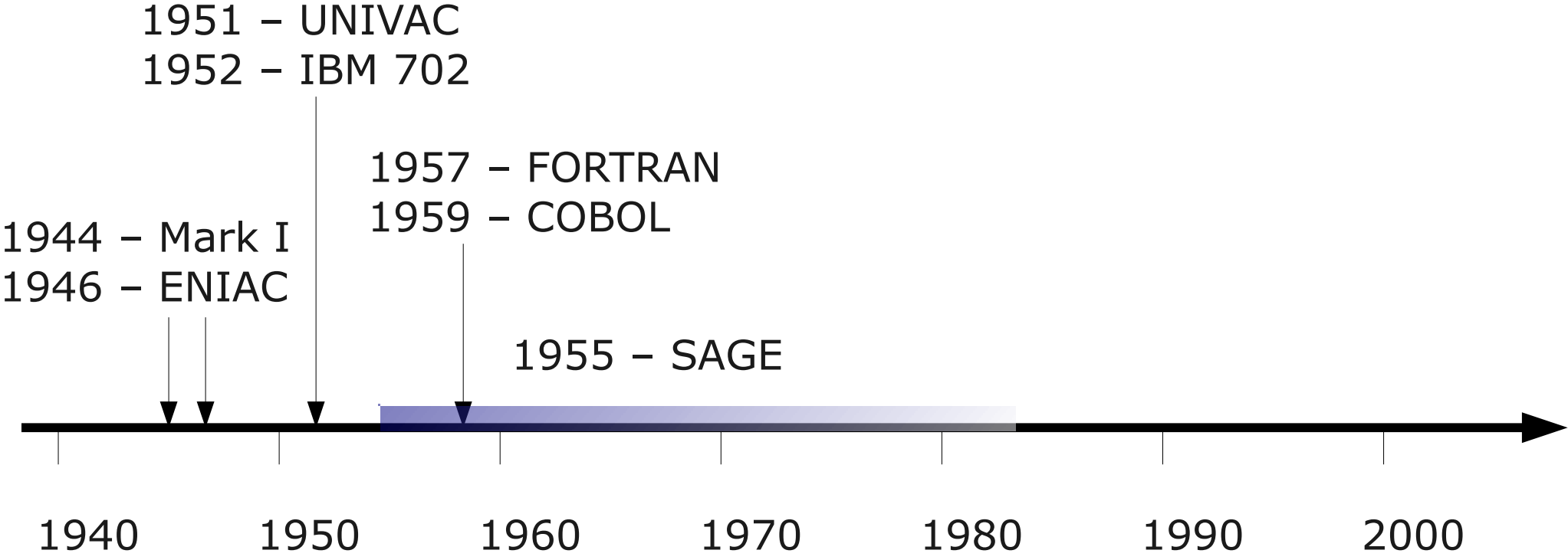
... Or why not at least a "ring"—at 609-921-8550?



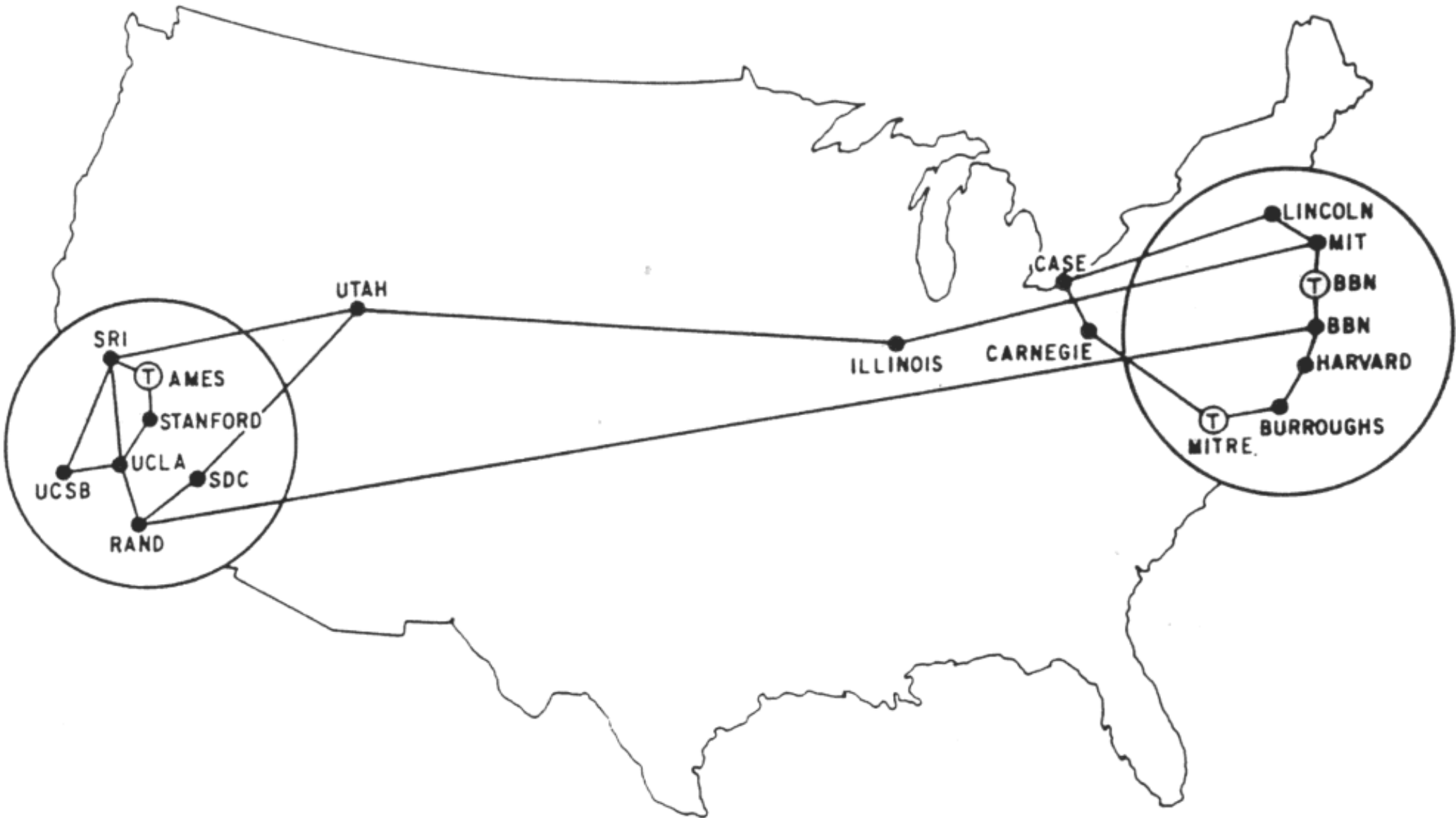
APPLIED DATA RESEARCH, INC.

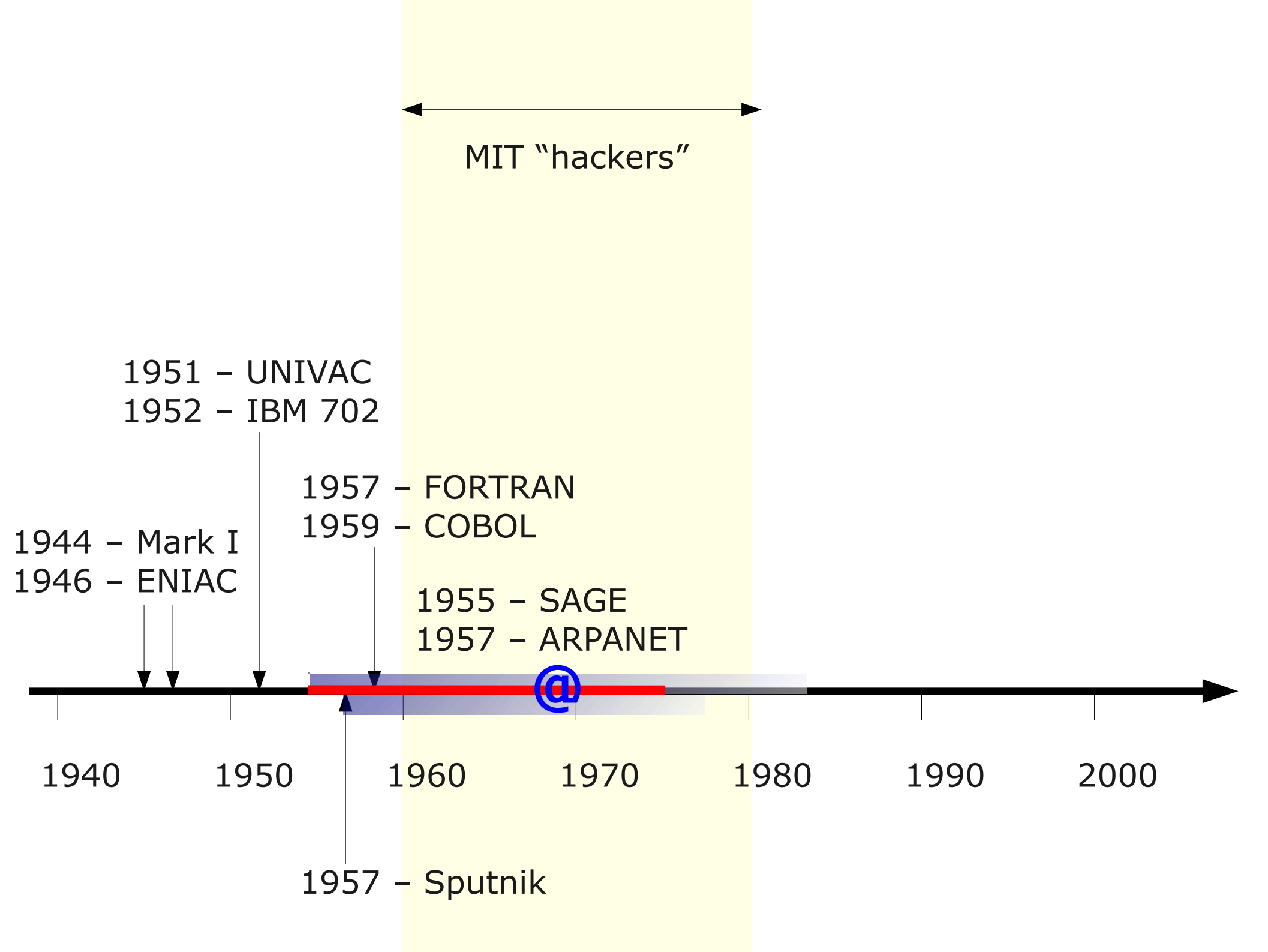
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ARPANET (1967-)





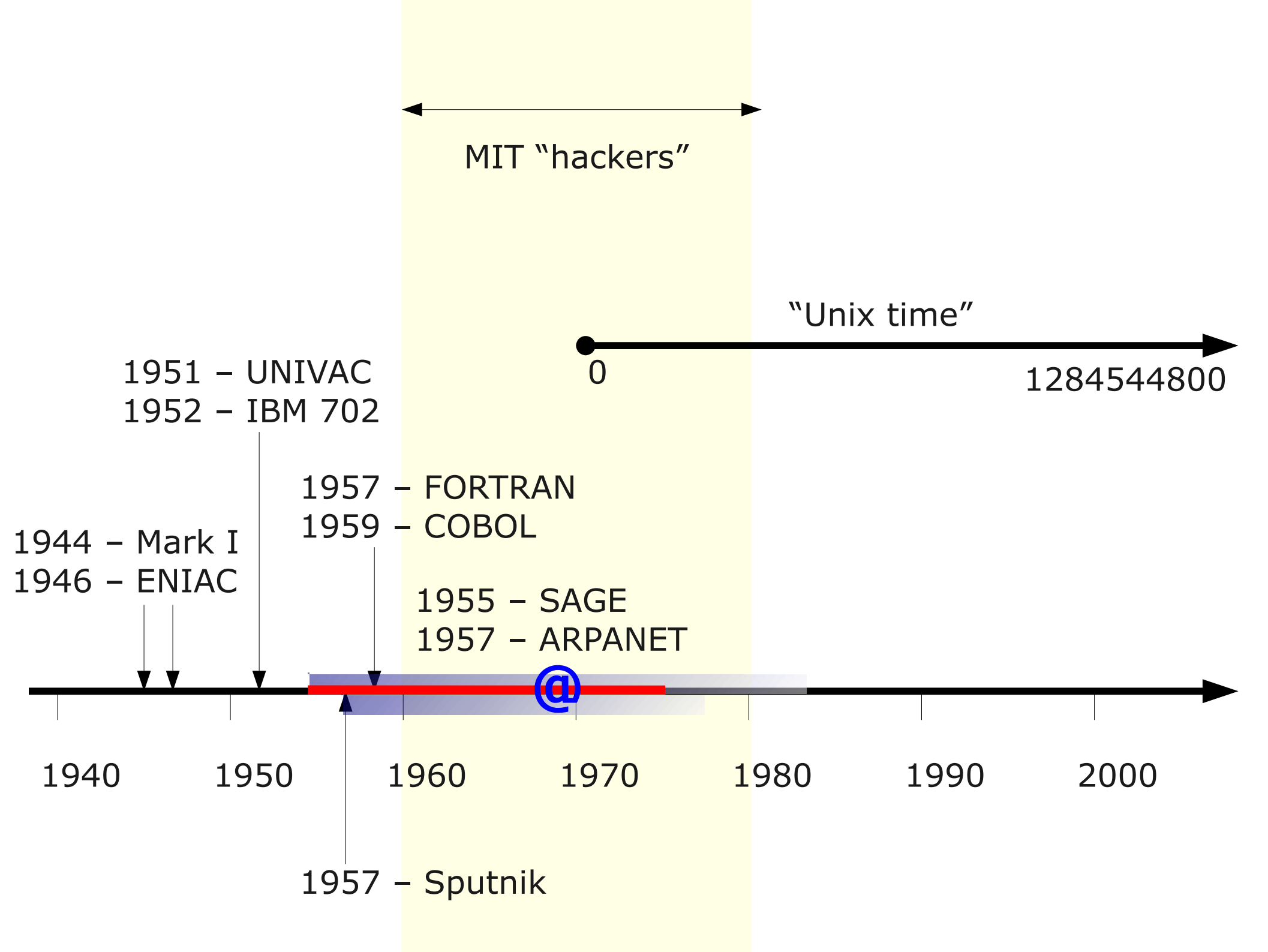
~ mid 1970s

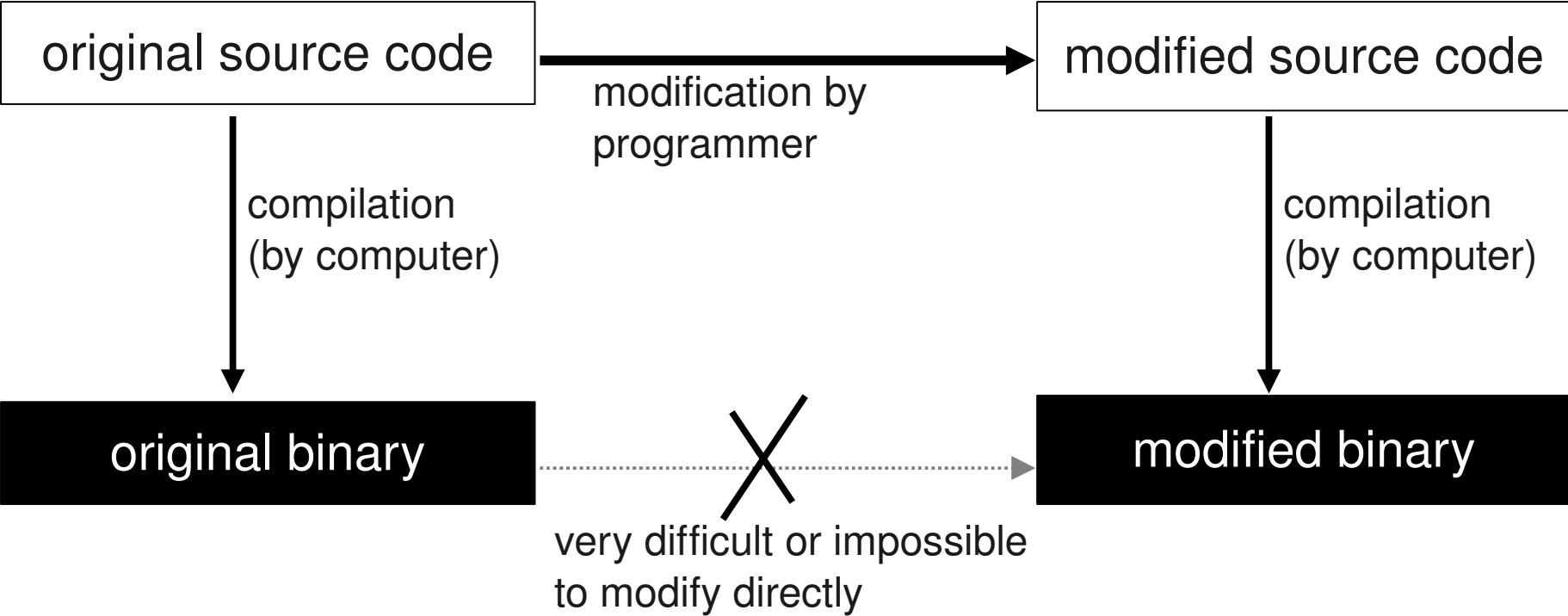


```
File Edit Options Buffers Tools Help
;; If you want to create a file, visit that file with C-x C-f,
;; then enter the text in that file's own buffer.

EMACS.

--11:**-F1 *scratch* (Lisp Interaction)--L10--Bot-----
```

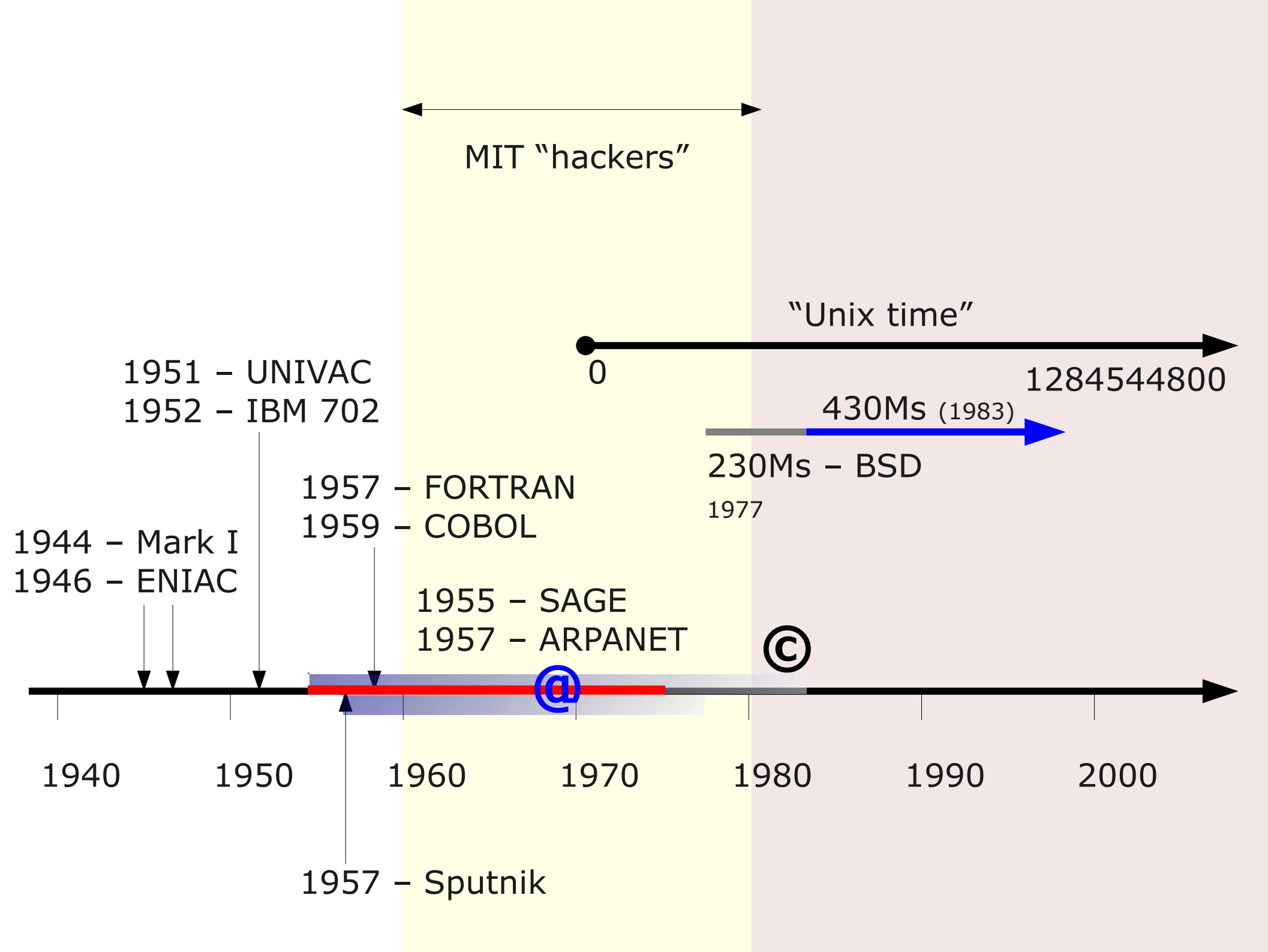




Berkeley Software Distribution



image source: <http://en.wikipedia.org/wiki/File:CampanileMtTamalpiasSunset-original.jpg>

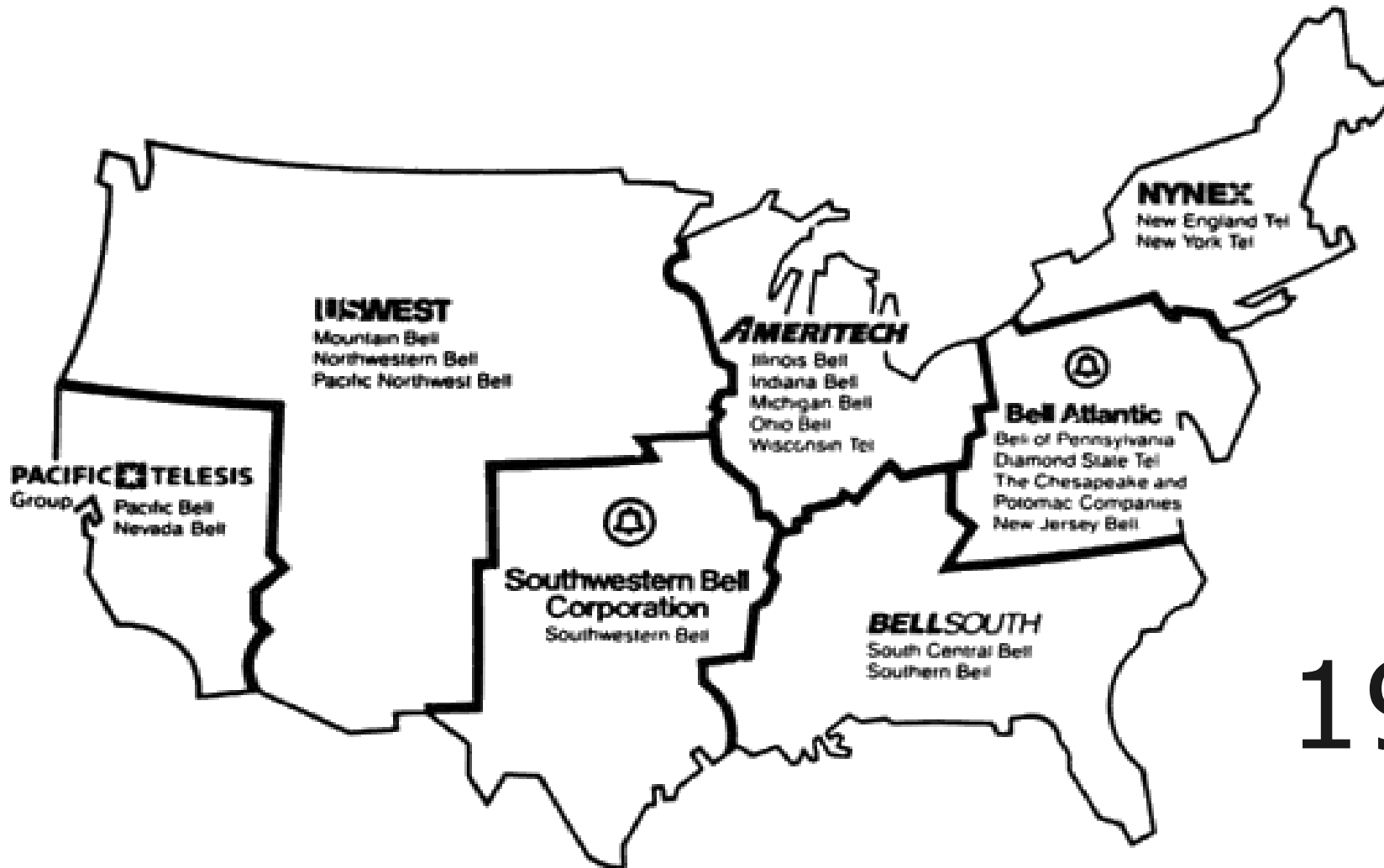




symbolics



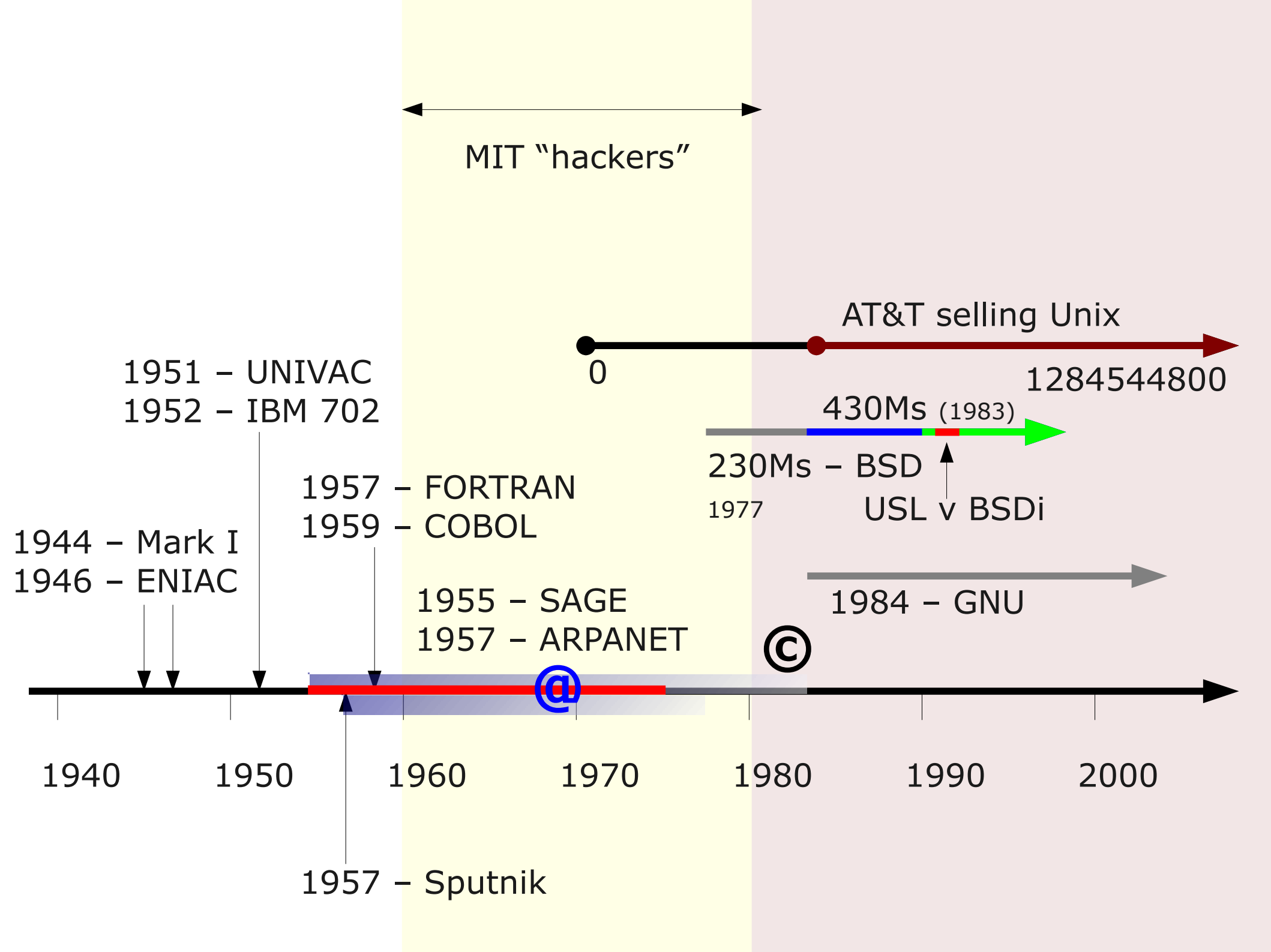
AT&T



1984

An “unencumbered” BSD





Richard Stallman



the GNU Project

to be continued...

(On week 3, we will first finish this lecture,
then turn to software and culture.)