Questions

AI4SE & SE4AI Workshop - 2024

Matthew Rose AIRC
ACQUISITION INNOVATION RESEARCH CENTER

“The mutl-disciplined field of Artificial Intelligence (AI) offers great potential benefit to the Army…C3I, Modeling, and analysis, and decision support. However, AI resources available to the **Army today are not adequate to realize this potential**.”

“Technology is advancing at approximately the rate of a **new generation every four years**. At this pace, new systems which are defined, developed, and delivering using traditional system life-cycle development will **run the risk of being obsolete upon installation.**”

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF STAFF
WASHINGTON, D.C. 20310

DACS-DMA 1 MAY 1986

SUBJECT: Charter for the HQDA Artificial Intelligence Center

Commander
U.S. Army Materiel Command
5001 Eisenhower Avenue
Alexandria, VA 22333

1. Reference Department of the Army Memorandum, dated 20 December 1985, subject: Action Plan to Accelerate the Integrated Development of Army Decision Systems.

2. Enclosed are the charter estab and authority of the HQDA Artifici 8 April 1986 and VCSA Memorandum t Army Decision Systems.

3. The multi-disciplined field of offers great potential benefit to making computers more effective as and analysis, and decision support available to the Army today are no potential. While a few Army agenc programs involving AI, no systemat ensure the judicious administratio talents across the broad spectrum Unless we act with corporate purpo organizational know-how, the situ National Science Foundation, the I Army Science Board have recommende the Army to incorporate AI capabil doing business and to provide oppo future.

4. Responding to these recommenda more available throughout the Army Artificial Intelligence Center to develop and implement the Army AI program will focus on the develop resources within the Army. The e details of the AI Center's mission the AI program as it develops.

DACS-DMA

SUBJECT: Charter for the HQDA Artificial Intelligence Center

5. Your assistance in supporting the program in your command is essential to the successful transfer and application of the technology across the Army. If you have any questions, contact LTC David Tye, Director, HQDA AI Center, DACS-DMA, Pentagon, Washington, D. C. 20310-0200, (AV 224-6900).

2 Enclosures

M. R. THURMAN
General, United States Army
Vice Chief of Staff

CHARTER
HQDA ARTIFICIAL INTELLIGENCE CENTER
OFFICE, CHIEF OF STAFF, ARMY

1. GENERAL

A. INTRODUCTION.

(1) Computer technology is advancing at approximately the rate of a new generation arriving every four years. At this pace, new systems which are defined, developed, and delivered using traditional system life-cycle development run the risk of being obsolete upon installation. The effective use of new computer capacity and techniques in general purpose automated support as well as embedded systems is essential to the successful planning, support and operations of numerically outnumbered forces.

(2) One of the significant areas of technological advance is the field of artificial intelligence (AI). Although there are many AI problems remaining unsolved, much has been learned that could make major contributions to the Army. Those areas of AI technology ready for transfer from the laboratories to applications development include commercially available hardware and software which would be considered non-standard by the Army, and software development techniques which are known by very few people in government employment. There is a variety of existing applications for symbolic processors and their intrinsic object oriented programming in the areas of "expert systems," knowledge-based systems, natural language processing, robotics, and intelligent tutoring. A methodology is required to facilitate the rapid transfer of these capabilities into the Army for mission support.

(3) The National Science Foundation, Defense Science Board and Army Science Board have recommended that the Services, including the Army, insert AI technology by focusing efforts as part of today's way of doing business and provide opportunity for growth in the future. These advisory boards further recommend that the technology be diffused throughout the Army and incorporated into its doctrine, tactics and programs.

b. MISSION AREAS: The HQDA Artificial Intelligence Center will have specific responsibilities and authority to accomplish the technology transfer described above in three specific mission areas:

(1) Providing advice and hands-on assistance directly to the CSA, VCSA, DA staff principals and MACOM's to ensure effective use of AI in systems now in use or being developed in the Army -- particularly in harnessing disparate data bases to support integrated Army Decision Systems.

(2) Proponency for AI technology in the Army.

(3) Ensuring that the Army stays at the leading edge of AI technology by maintaining frequent, high level contacts with industry and the academic community.

DACS-DMA 1 MAY 1986

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What Happened?

22-51
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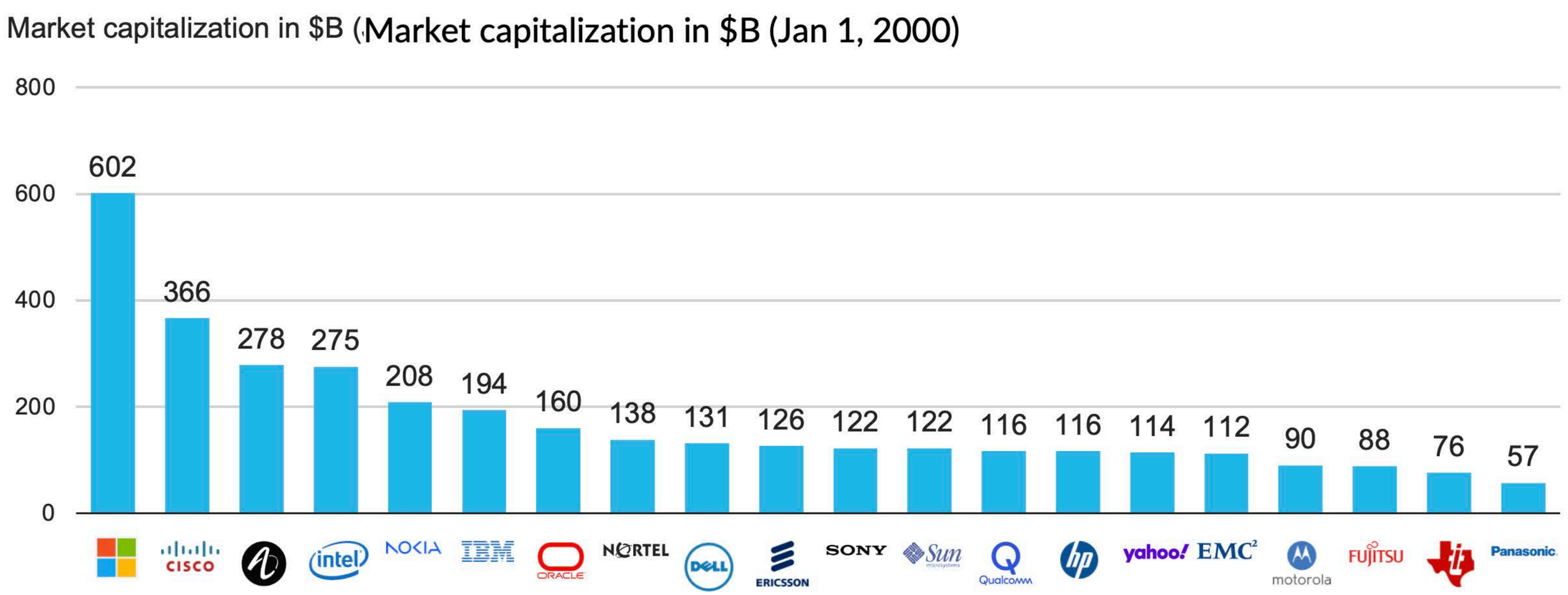
Top 20 tech companies

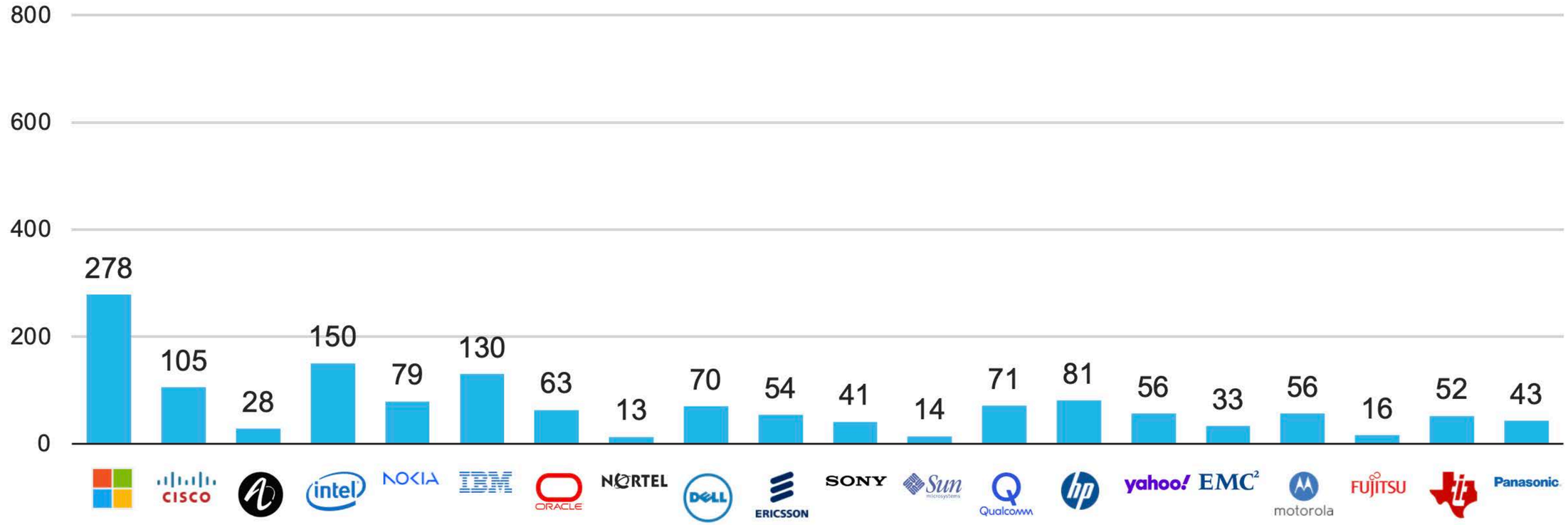


Source: CapitalIQ

Note: Alcatel-Lucent pro-forma for 2000

Top 20 tech companies

Market capitalization in $B (Market capitalization in $B (Jan 1, 2006)



Source: CapitalIQ

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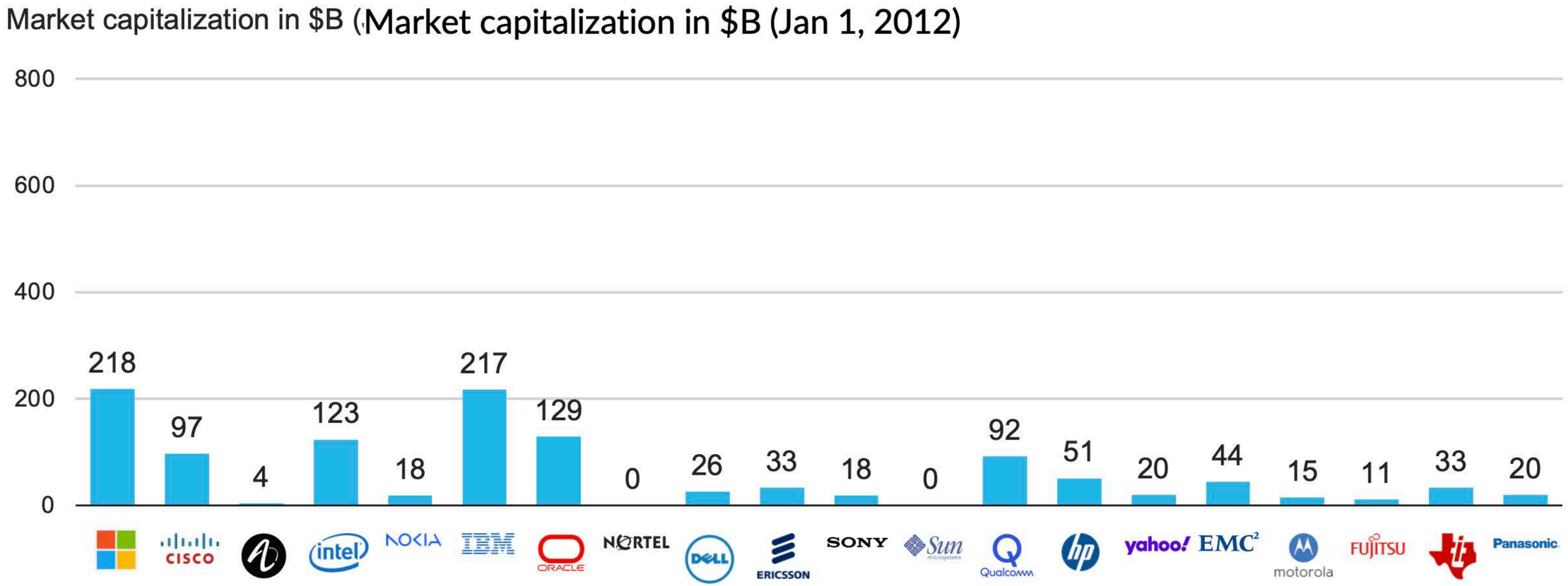
Top 20 tech companies



Source: CapitalIQ

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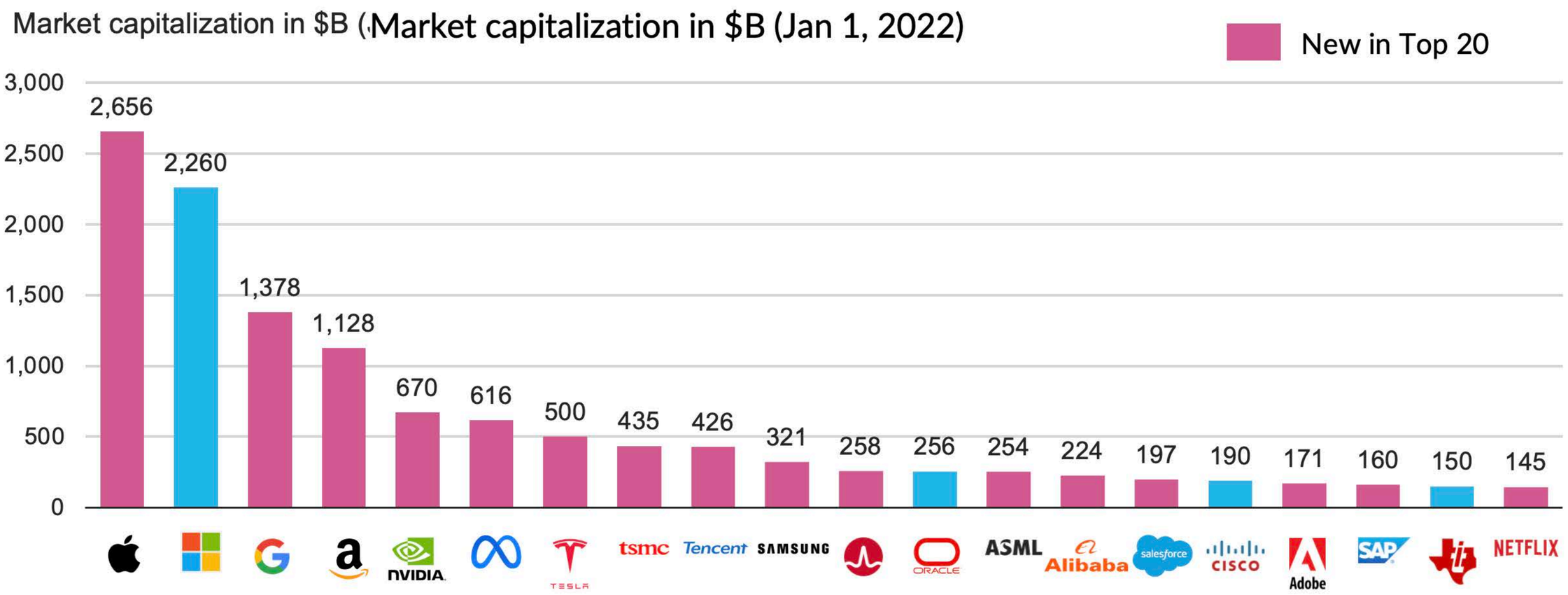
Top 20 tech companies



Source: CapitalIQ

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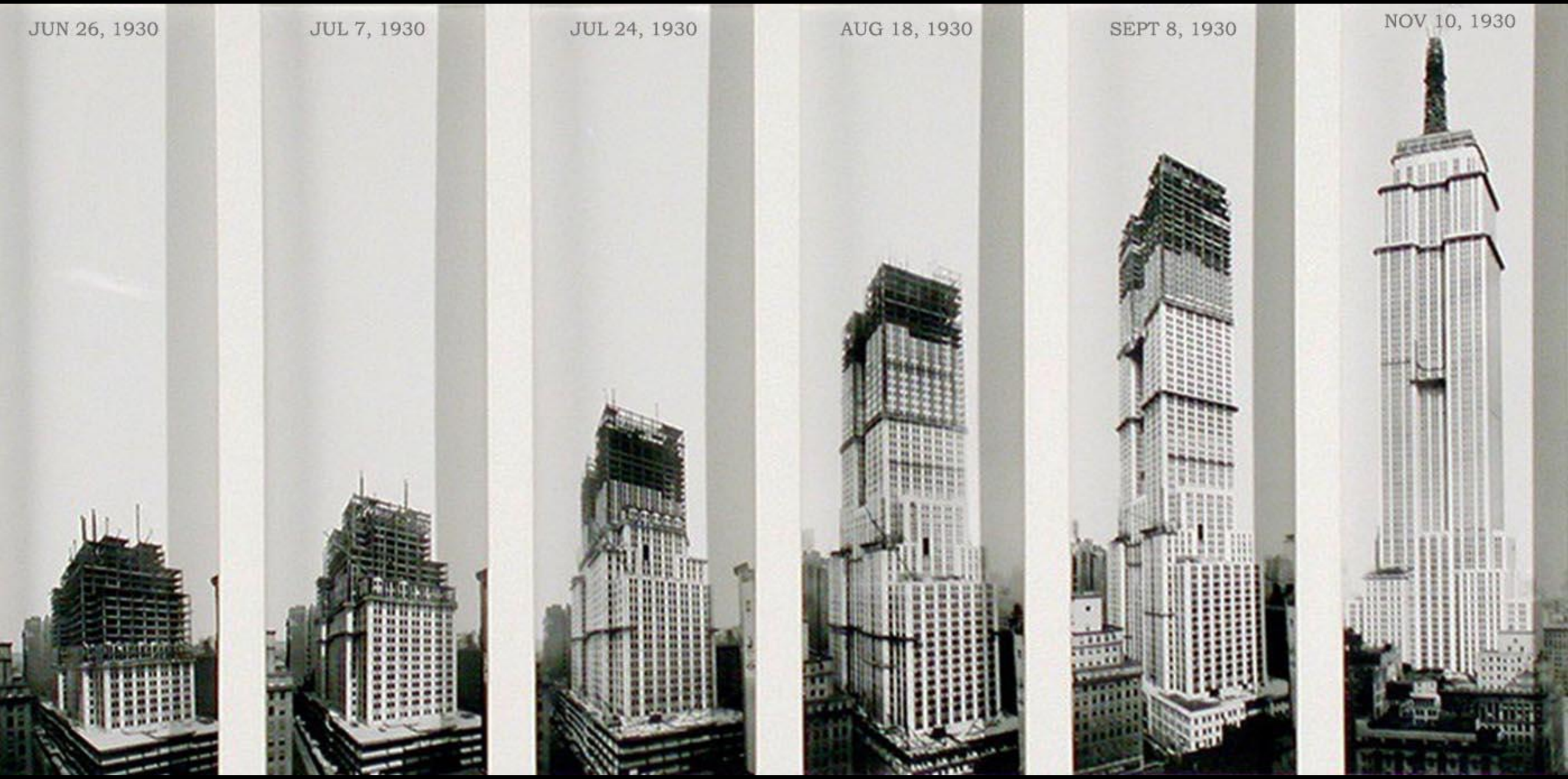

Source: https://viewing.nyc/vintage-photographs-from-1930-show-progression-of-empire-state-building-construction/

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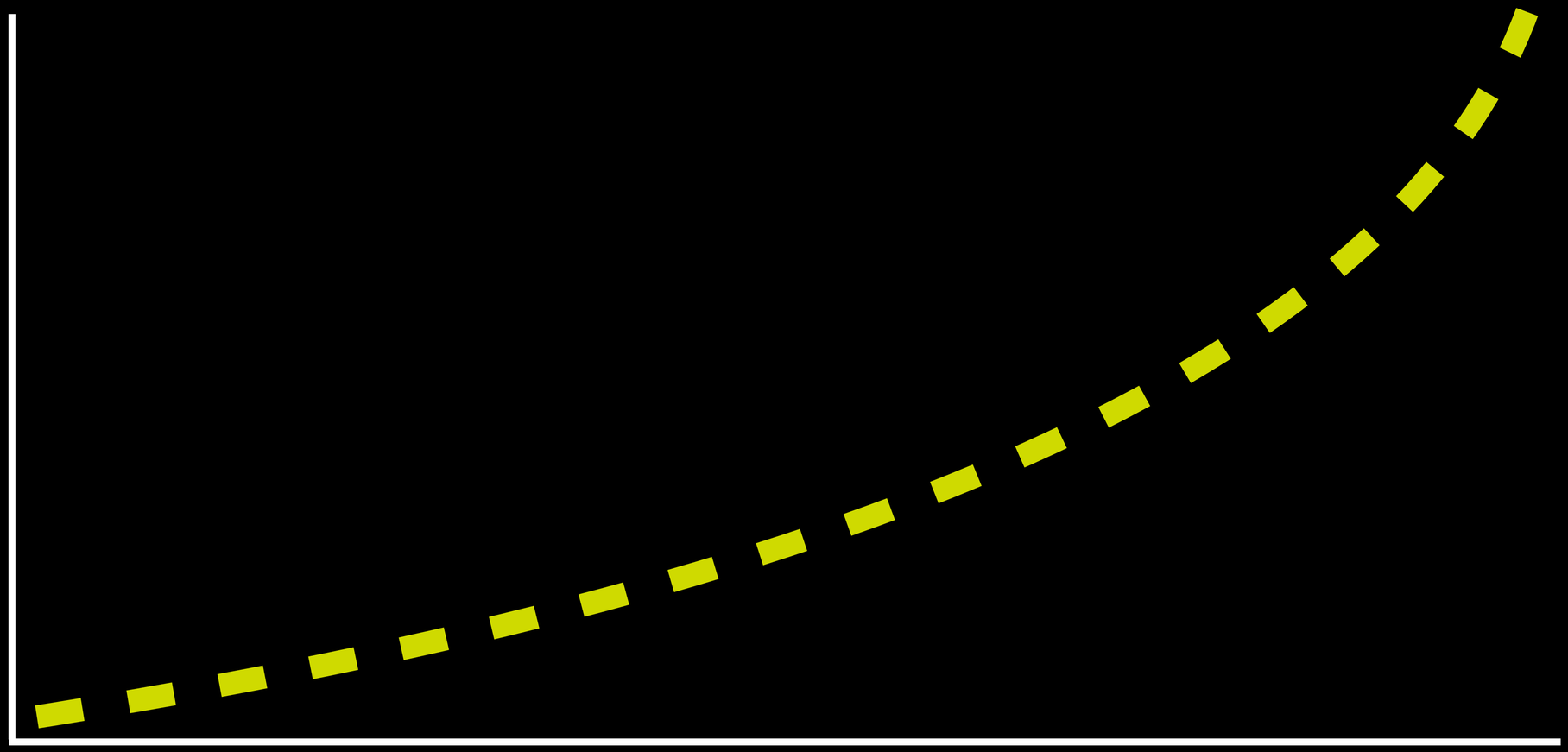

FINE
GOLD
999.9
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FINE
GOLD
999.9
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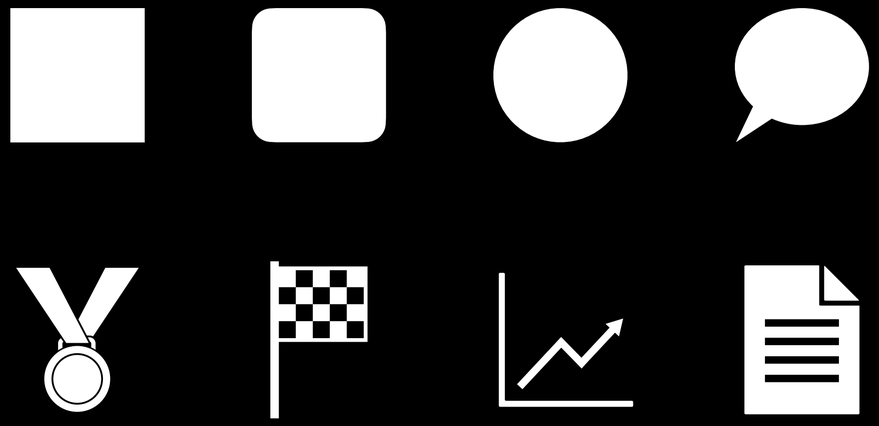
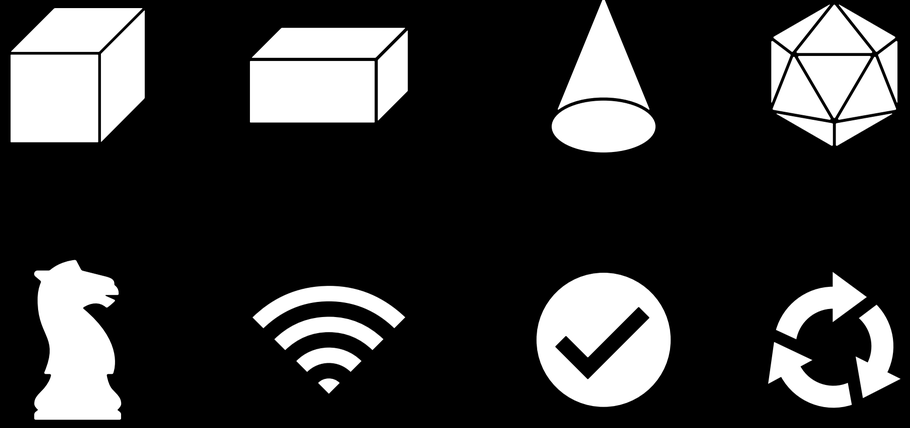
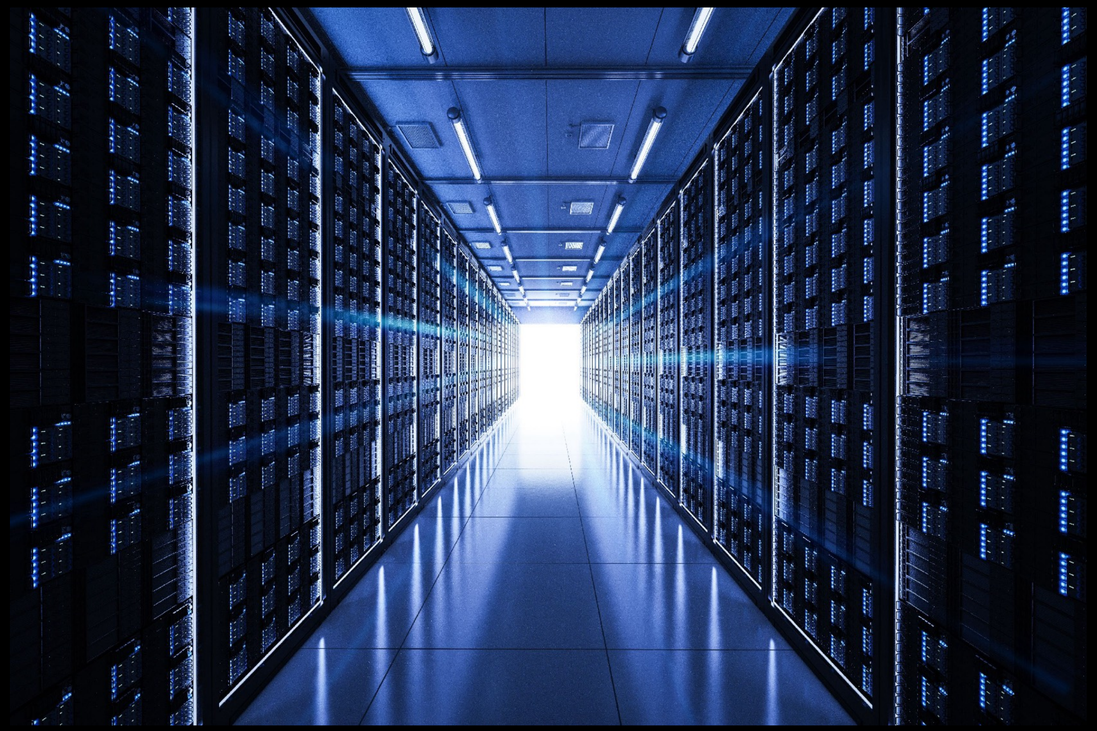
Are we ready?

Enterprise
Corporate
Industries
Regional Markets
...

Public Sector
Defense
Manufacturing
Aero & “DIB”
...







What about AI?

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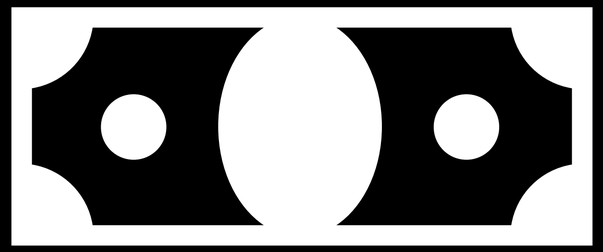
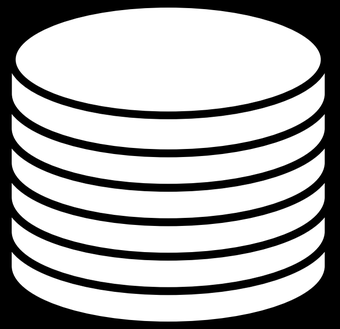
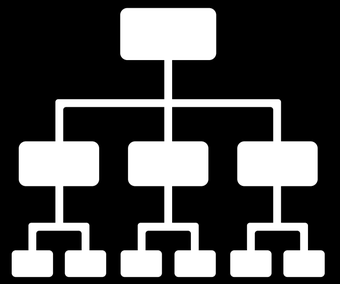
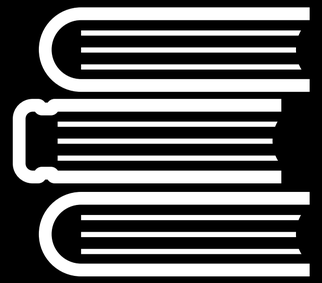
Forgot password
Remember me
LOGIN









What about Policy?

THE WALL STREET JOURNAL.

Why Software Is Eating The World

By Marc Andreessen

Updated August 20, 2011

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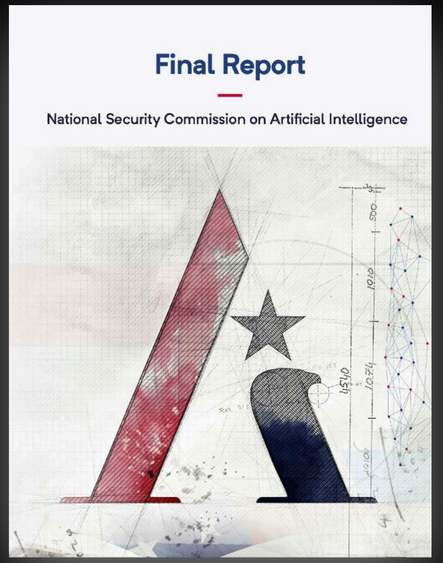

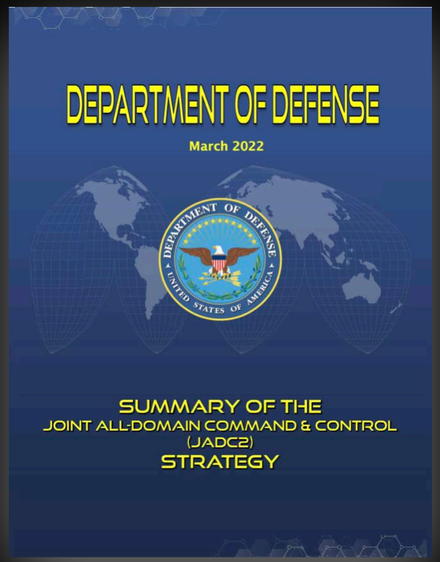

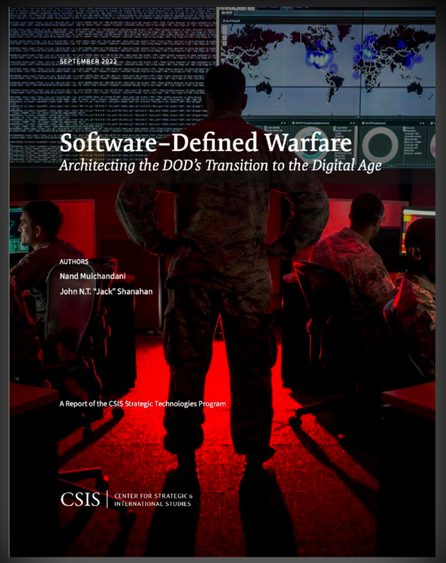

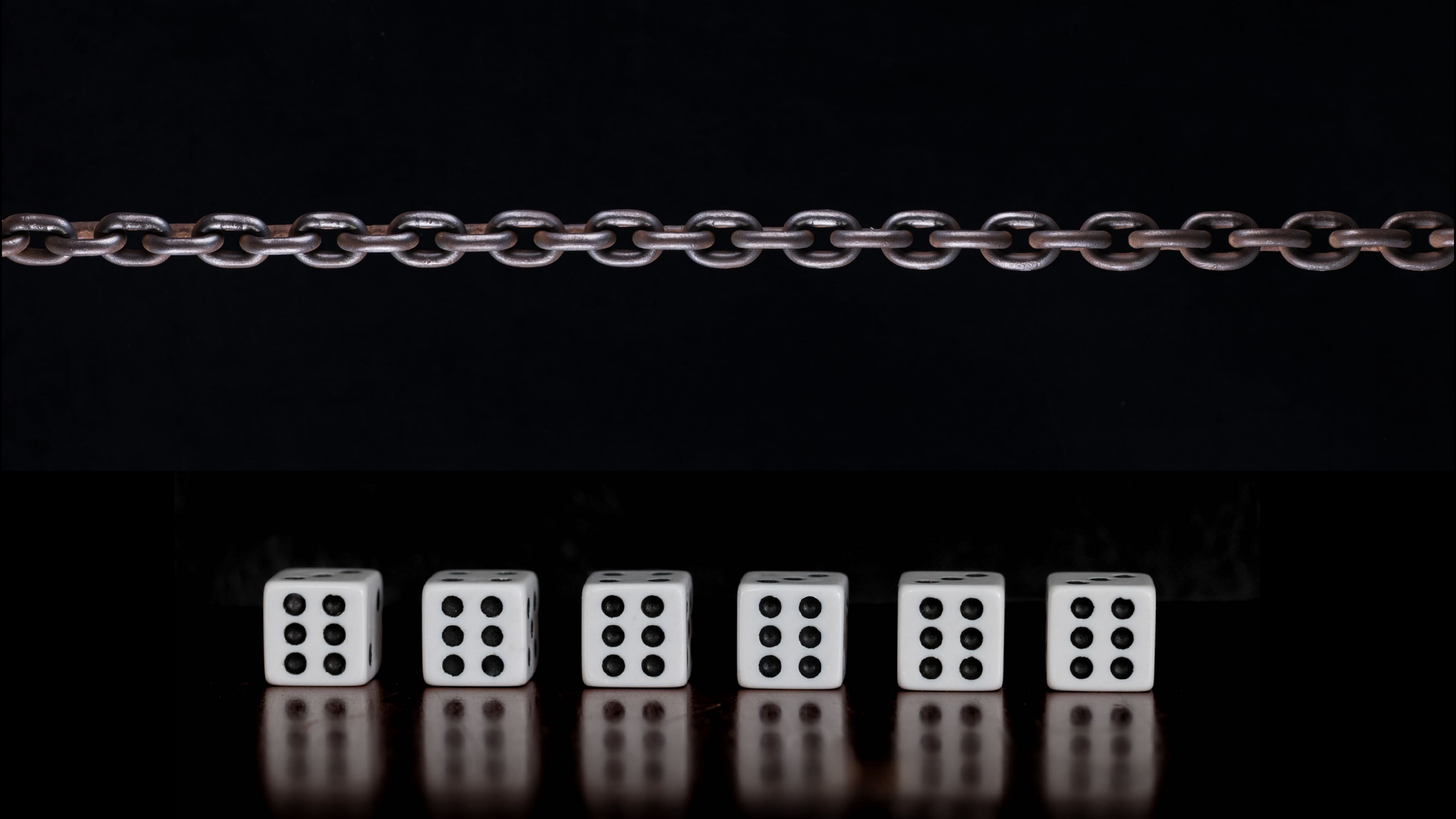

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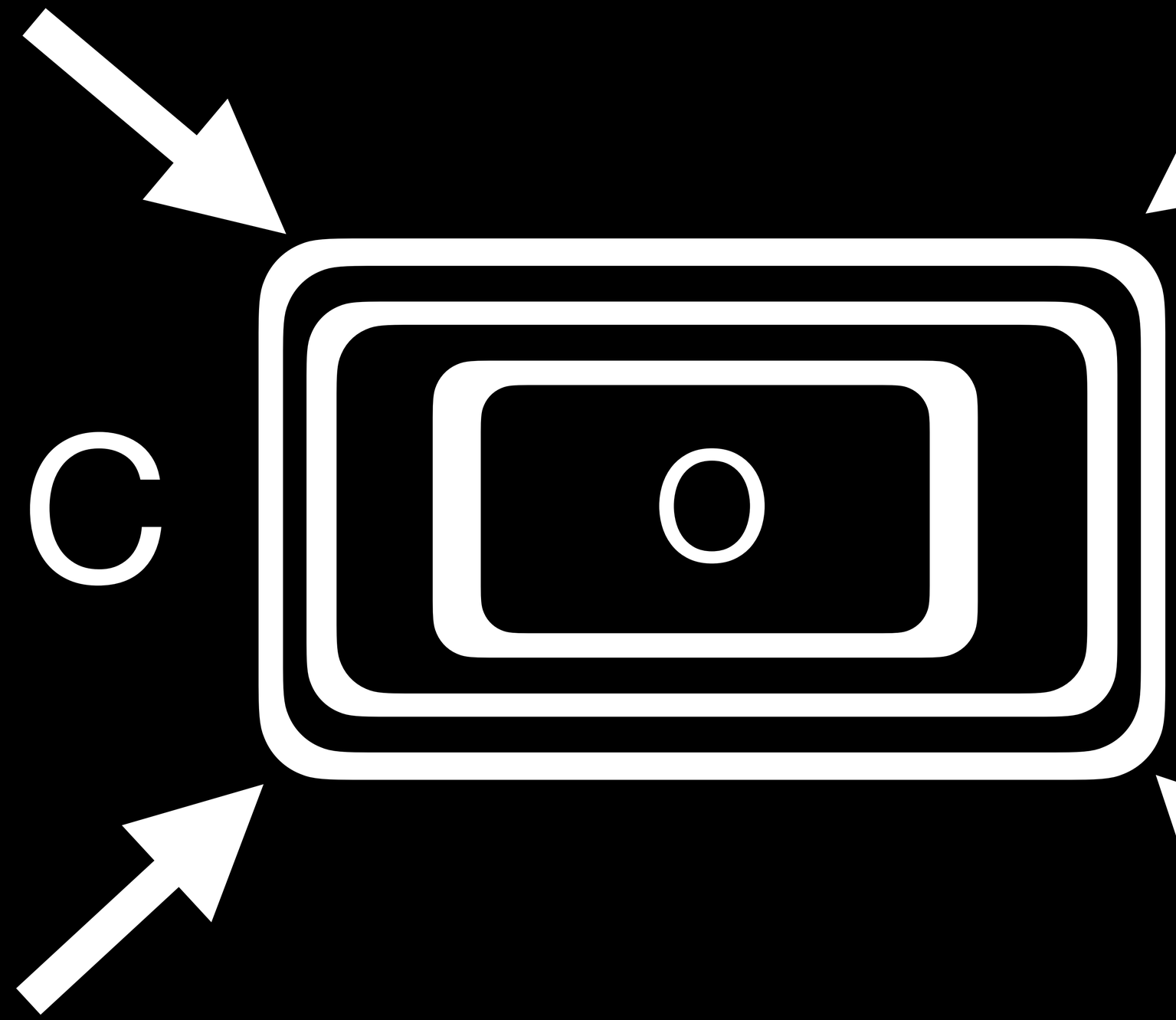
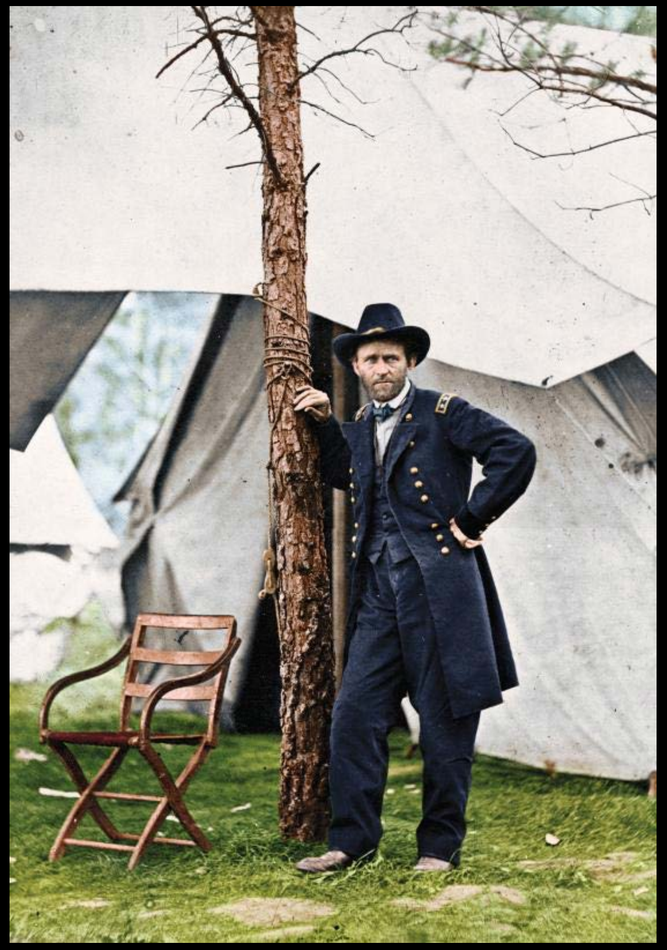
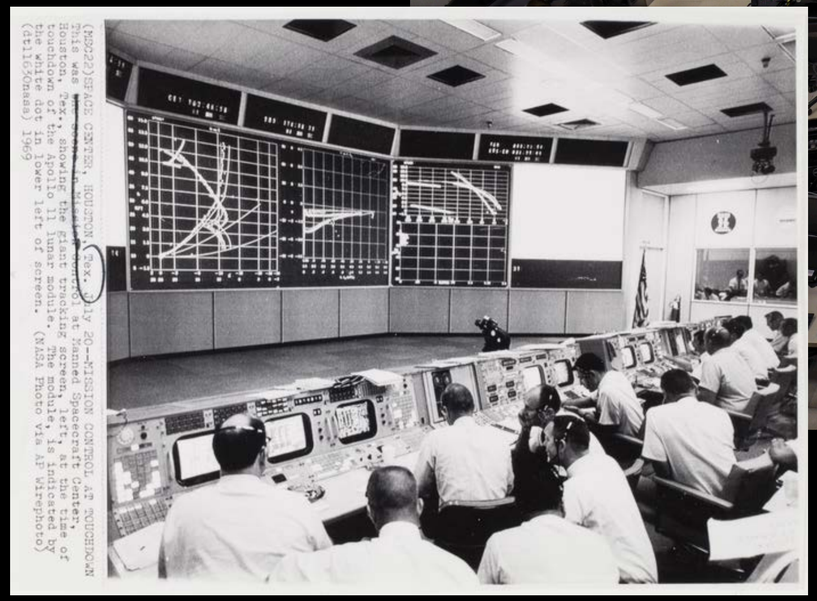


What should the defense systems engineering community know?



Source: imdb.com - 1917 Movie 2019.


(MSC22)SPACE CENTER, HOUSTON (Tex. July 20--MISSION CONTROL AT TOUCHDOWN
This was the scene in Mission Control at Manned Spacecraft Center,
Houston, Tex., showing the giant tracking screen, left, at the time of
touchdown of the Apollo 11 lunar module. The module, is indicated by
the white dot in lower left of screen. (NASA Photo via AP Wirephoto)
(dtl1630nasa) 1969

Questions