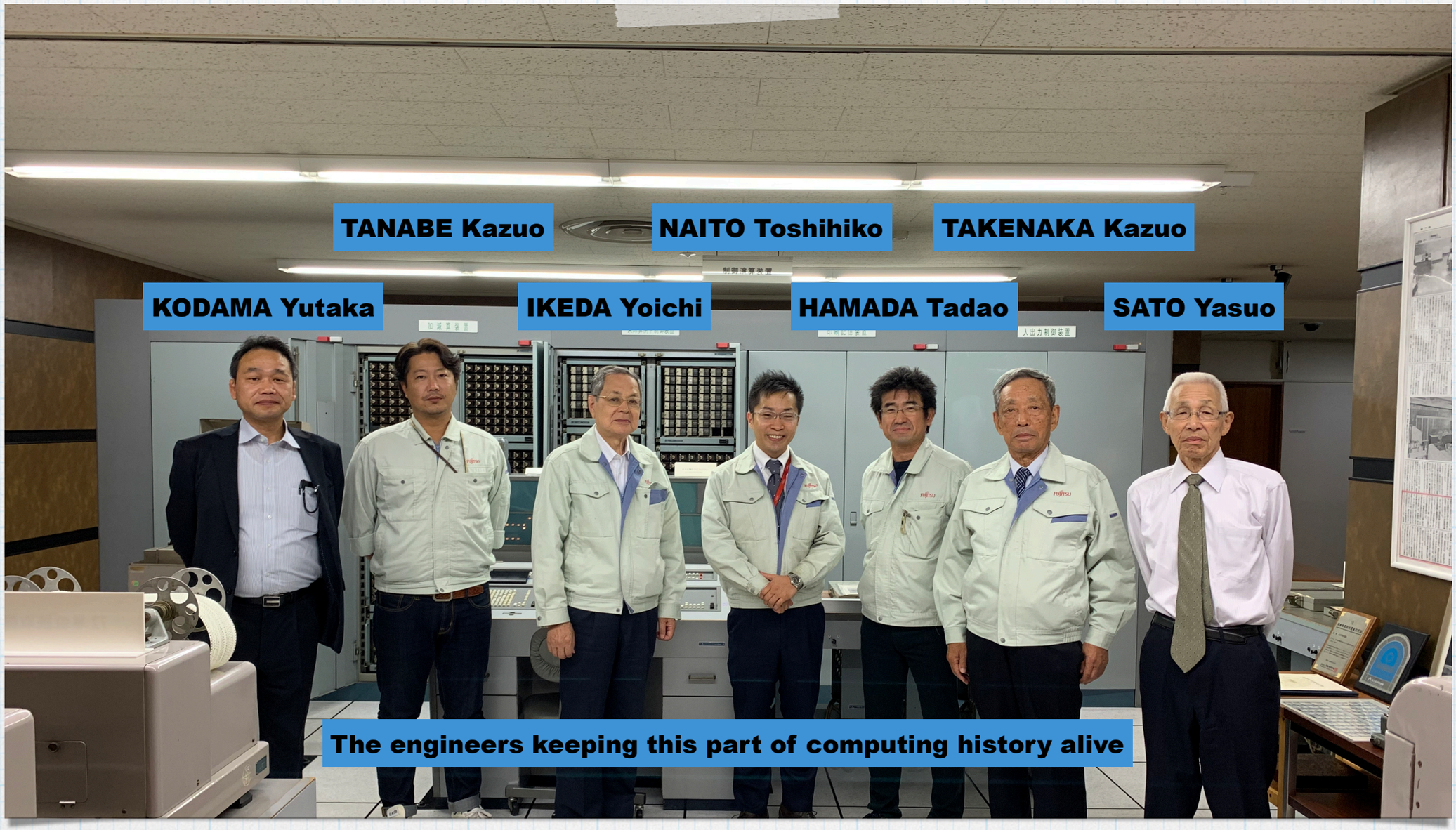
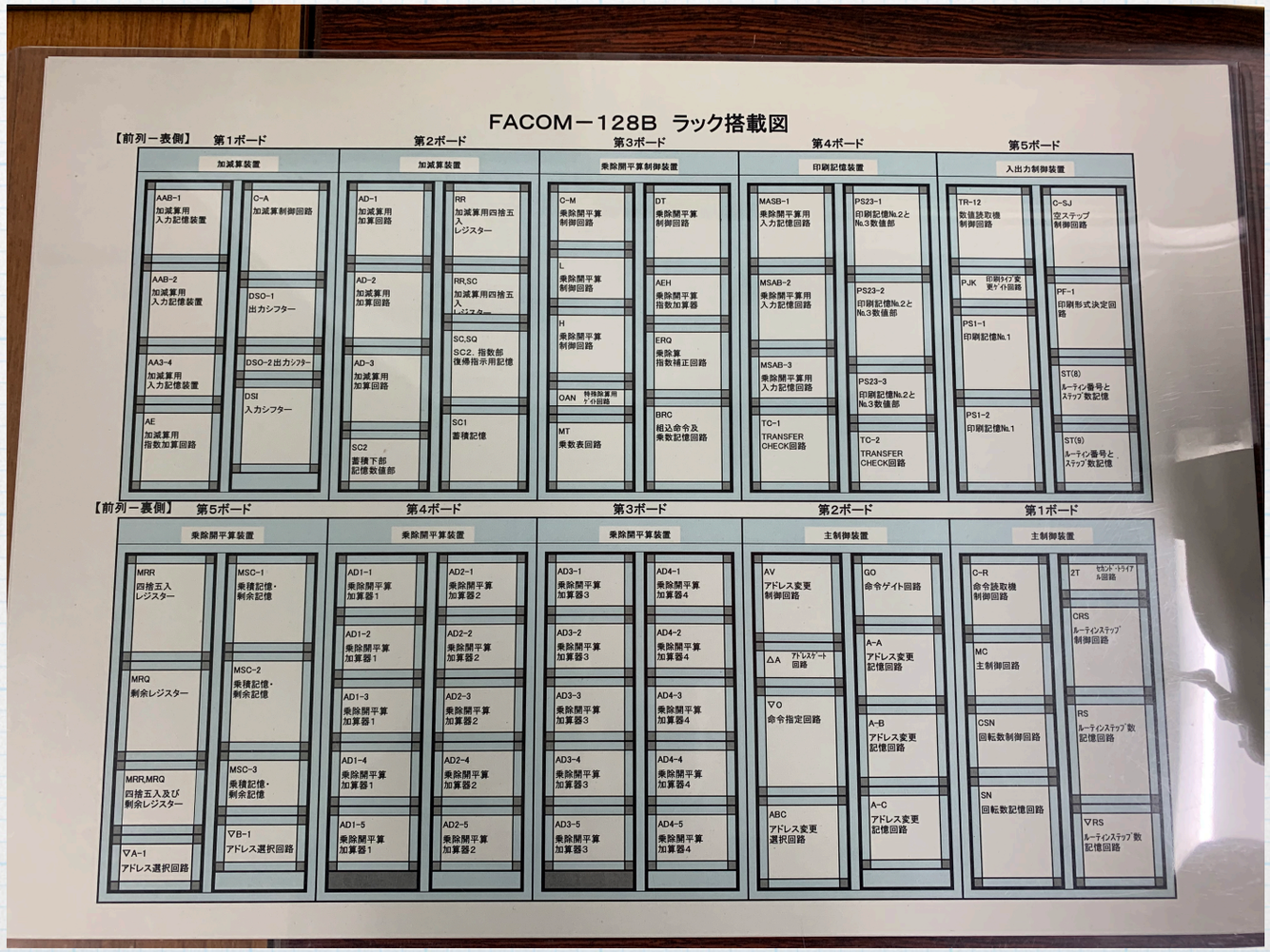


The Fujitsu FACOM 128B

A fully-operational 60-year-old electro-mechanical processor, located at the Toshio Ikeda Memorial Hall at Fujitsu's Numazu Plant.

One of the world's oldest working digital computers!

- Base-10, Bi-quinary digit representation (similar to an abacus). 7 bits per digit (5 for numbers 0-4, 2 for +0,+5). Sparse representation aids in error detection.
- 180 69-bit words of crossbar data store, 8 decimal digits plus exponent (+/-19) and sign. Implemented completely with relays — no unrealiable valves!
- Hard-wired mathematical constants.
- Program executed from paper tape, with subroutines located in a clever “PPROM” (Paper Programmable Read-Only Memory).
- 3-Address Architecture (A = B op C).
- Adds in 0.1 to 0.2 seconds, square roots took up to 1.4 seconds.
- Automatic execution retry when error was detected.



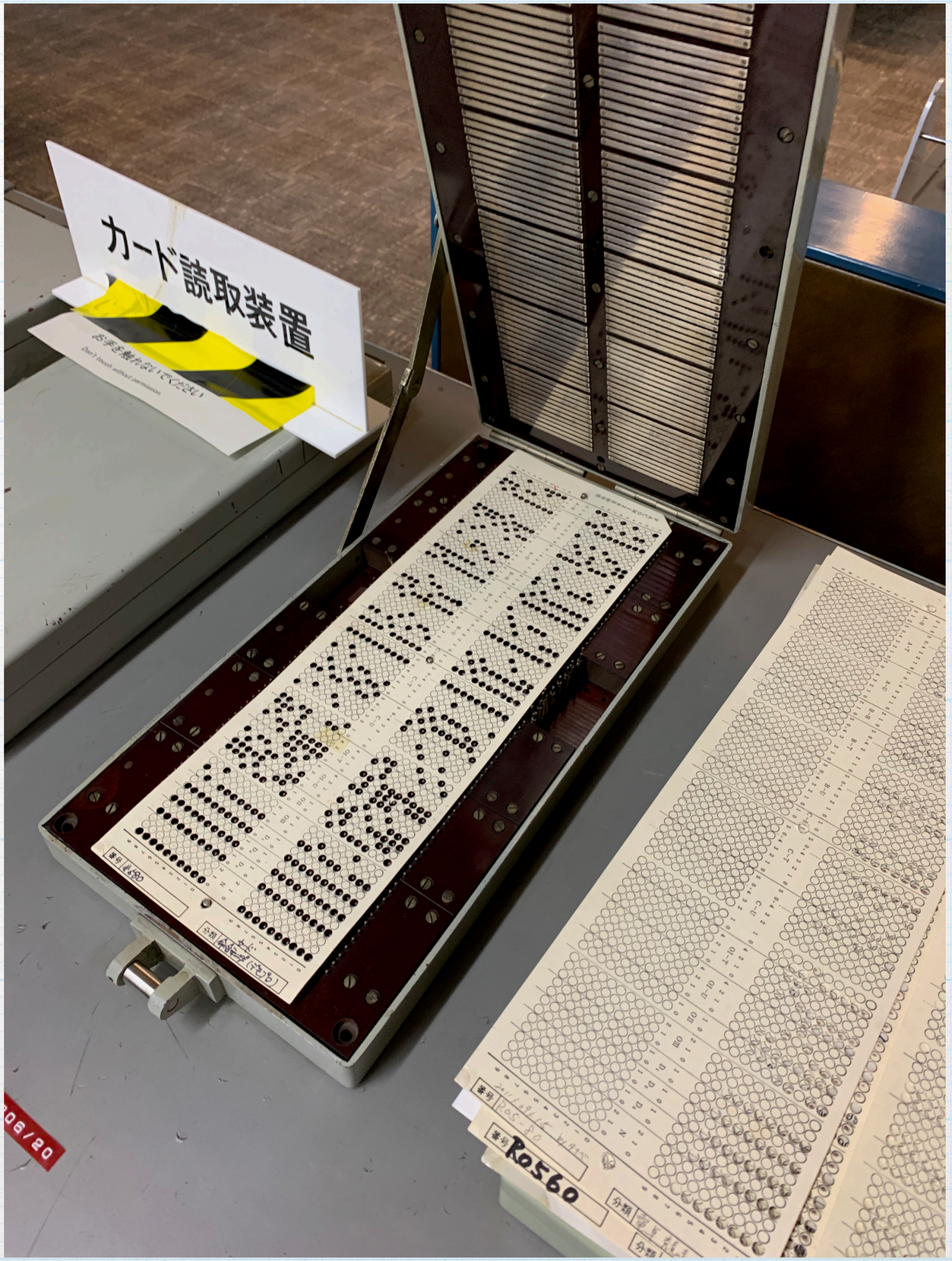
Programs execute off paper tape. When this machine executes a loop, it really executes a loop!

Multiple Card-based Programmable Read-Only Memory.

Used for storing data, constants, and subroutines.

Base is an array of pins.

I don't have details on the instruction set or how they did branching... yet!



We’ve come a great distance in 60 years, but it’s nice to remember where we stopped along the way...

Thanks to

TAKAHASHI Yoshio

and the engineers maintaining
the FACOM 128B:

児玉　豊	KODAMA Yutaka
田邉　一男	TANABE Kazuo
池田　洋一	IKEDA Yoichi
内藤　俊彦	NAITO Toshihiko
濱田　忠男	HAMADA Tadao
竹中　一生	TAKENAKA Kazuo
佐藤　靖夫	SATO Yasuo

for generously allowing me to see
this unique bit of computing history.

Email Director Takahashi
(tkh@fujitsu.com) if you'd like to visit.

The museum is about 50 minutes
by Shinkansen + 30 minutes by
taxi from Shinagawa in Tokyo.

The secret is to find out when it's
"maintenance day." That's when
you can see it actually running.