

UNCLASSIFIED

# DAILY ENTERPRISE



## (U) HISTORY TODAY - FRIDAY CLASSIC: March 25, 2016

FROM: CCH

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### (U) A look back at 1962 – computer coding solutions

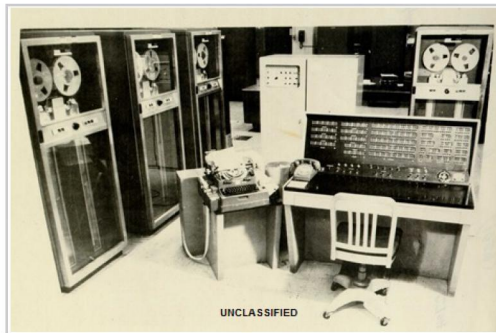
(U) Every Friday, the Center for Cryptologic History republishes a favorite *History Today* from our 13-year archives. We invite our readers to send us suggestions for favorite articles they'd like to see reprised.



(U) Many *History Today* articles have described the early days of computing. This article from 2010 notes an interesting problem from those times and how it was solved. The disclaimer at the end of the article notwithstanding, we also added a historic security poster of interest.

### (U) HISTORY TODAY – October 12, 2010

(U) Some years ago, computer programming pioneer Chet Staney recalled an interesting problem he encountered in solving some processing errors. His recollections help illustrate how the computer world has changed over half a century.



(U) A BOGART serial processor computer

(U) The year was 1962. Chet was one of a handful of computer programmers employed by NSA, and, among several systems, worked on one known as BOGART.\*

(U) BOGART was a serial processor, like all computers of its time — that is, it could run only one program at a time. It had a 4K, 24-bit memory. The coding for a program was input via 7-level chadless paper tape. The output also came on paper tape, which was put into a Flexo-writer, a typewriter that could read the tape, for printing. BOGART also was one of the earliest remote-entry computers, with eight outstations.

(U) Chet successfully wrote several programs to solve a series of analytic problems. As he was struggling with the final program of the series, he complained to a colleague that the program was successful in getting the correct answer to an equation, but, just before it finished, it wiped out the system software, requiring an extensive period of reloading.

(U) The colleague suggested that Chet have his program copy the system software to magnetic tape at the start and have the computer read it back into its memory as the last step in the program. Chet did this. As it happened, after further work with BOGART, he discovered the original error that erased the system software, but he didn't bother fixing it, since his "work-around" did the job and the customers were quite pleased with the results.

(U) Some time later, Chet encountered some BOGART technicians frantically working on the computer. The principal operator complained that the computer clock wasn't working right, that it would lose 50 minutes one day, and perhaps 20 the next and a different amount on the third day.

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(U) Chet now realized that every time he ran his work-around program, it took the time from the magnetic tape backup and restored the original time to the computer along with the backup software. He decided it was too embarrassing to tell the operator the cause, but suggested that she make a couple of changes to the system, giving her his solution to his original error.

(U) His new fix worked and the time malfunction "miraculously" healed itself. Chet commented in the mid-1990s: "I bet those technicians are still wondering why."

(U) \*The computer system was not named for the actor, Humphrey Bogart; it is surmised it was named for one of its early designers at a contractor.

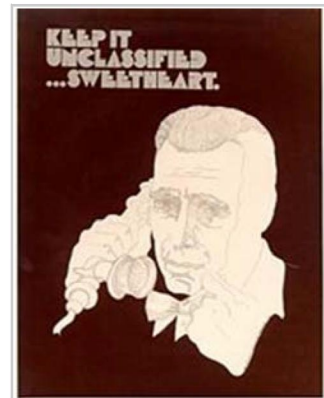
(U) HISTORY TODAY – September 17, 2014

(U) Historic security poster:

Date unknown, but it's typical of a style of security poster that featured images of celebrities and used their catchphrases to attract attention to the message.

(U) To discuss historical topics with interesting folks, visit the Center for Cryptologic History's blog, [History Rocks](#) ("go history rocks").

(U) Have a question or comment on History Today? Contact us at [DL cch](#) or



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