

SECRET

CIA/SI/78-10068--M

SI 78-10068 M

17 May 1978

22624
MICRO ONLY

USSR: Large-Scale Computer Systems

- I. Aside from their widely publicized general-purpose computers, the Soviets have developed and are developing some advanced computers capable of calculating at high speed. These computers will help the Soviets solve complex military and technological problems in such areas as air defense, ASW, nuclear weapons design, aircraft design, seismic analysis, and hydrometeorological calculations. In the past, the limited performance of Soviet scientific computers has put major burdens on algorithm and software developers; with their new computers, Soviet programmers will be able to address their problems in shorter amounts of time in a more straightforward manner than was previously possible.
- II. Two large-scale systems, the El'brus-1 and -2, are indicative of Soviet progress in developing high-speed computers. They are comparable in computational capabilities with some of the largest and fastest US

E2 IMPDET CL BY

SECRET

4675052

-3

~~SECRET~~ []

computer systems now available commercially (including the CDC Cyber 76 and the Cray-1). Prototypes for both models probably already exist, and there are indications that the El'brus-1 is undergoing final engineering testing. Production of multiple copies will probably begin in 1979. As is the case in the United States, the Soviet large-scale scientific computers are not intended to be produced in the large numbers that general-purpose computers such as the CEMA countries' "Ryad" models are manufactured.

Note: In addition to the overview presented above, the briefing can be supported and supplemented with the following items:

- Historical details of development of large-scale computers.
- Information [] on a large-scale computer, other than the El'brus-1 and -2, that was developed for the military and is well advanced over any computers intended for civil uses.

~~SECRET~~ []

~~SECRET~~

- Information on the status and prospects of large general-purpose computers patterned after computers of the IBM Corporation.
- Implications for Soviet ability to address a variety of important military and civil applications of computers.
- Specific details on the performance and architecture expected from El'brus-1 and -2.

~~SECRET~~