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Massachusetts Institute of Technology
Differential analyzer

Diary: WW

JUN 20 1950

March 17, 1950 - Professor S. H. Caldwell (MIT)

C comes to WW's home for a two-hour conference. When the Differential Analyser was planned at MIT, it was confidently expected that industry would demand something like one-half of the time of this great computing machine, and would pay for this on such a scale as to finance the other half of the time for purely scientific work. The simple fact is that this has not worked out, and the operation of this machine and the group associated with it have become a real burden on MIT. The reason for this, in turn, is that the whole computer science and art has moved forward something like ten times as rapidly as one could possibly have anticipated in 1936. When this development was undertaken, one would probably have guessed that in something between 25 and 50 years the Differential Analyser would become outmoded because of the development of more powerful, more rapid, and more flexible computing machines. This would have been accepted as both inevitable and desirable. But the acceleration in this art, due primarily to the war, has brought about this development in something like 10 years instead. The Electronic Digital machines are so much faster and so much more flexible that they have made an analogue device such as the Differential Analyser, essentially obsolete.

WW thinks that this should not be viewed as a tragedy, but rather as a triumph. The money spent on the Differential Analyser unquestionably played an important role in the whole development, and is almost infinitesimal as compared with the sums now being spent on the large electronic computers. The situation is somewhat comparable to that presented by the so-called Giant Cyclotron. [When the RF contributed more than $1,000,000 for this instrument, it was naturally expected that it would continue to be the definitive instrument, for many years to come, for the acceleration of elementary particles. In the case of the Giant Cyclotron, it is of course still being used on an exceedingly busy schedule. But it is also true that it has been outmoded by other and much larger and more powerful devices.]

Grant: 205D
Univ. of California Radiation

C recently reported to the administration at MIT that they would have to furnish at least $25,000 to keep the Differential Analyser going. They have decided that they ought not to do this, and they therefore plan to discontinue the use of this computer. It will presumably be dismantled.

Since the RF grant was an outright one for capital expenditure, the decision of course lies entirely with the MIT authorities, and it is merely a matter of courtesy for them to report this situation to us. (See, however, WW's letter of March 27 to Caldwell.)

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