

FIN/50/5

23 February, 1961

Dear Jones,

Atlas Computer for H.I.R.N.S.

I am writing to confirm the answers I gave to you over the telephone on Friday and Tuesday last to the questions you put to me about the proposed installation of an Atlas computer.

You asked whether we had provided for the biggest possible Atlas computer and if not whether there was much risk that we might be returning later for authority to expand the installation substantially. I said that the question of the size of the core store had been gone into very carefully and the present proposal was for a store large enough to deal with a great majority of the calculations for which the computer would be used. A better store could have been provided, but it had been felt that the additional cost could not be justified by the increase in efficiency that would result for only a small minority of calculations.

As regards the printers, I explained that the results of the calculations had to be reproduced in printed form and that this was the function of the printers. It seemed reasonable to have a second printer in a big installation, if only as a standby; and I can now add that there may well be a need for subsidiary printing operations, directly from punched cards.

I assured you that there would definitely be a need to interchange information between the Atlas and our IBM machines either at Risley or at Aldermaston, and that the provision of a tape unit for such interchanges was not merely a precaution.

I explained that the figure of £0.45lm. for contingencies and buildings was a very round estimate and that we could not give any breakdown between the two components of it.

You asked whether we expected that there would be any incidental capital expenditure of significance and I assured you that so far as we could see there would be none.

As regards running costs, I said that Ferranti's had not yet made any detailed estimate of the maintenance charge and that this charge would of course depend upon the number of shifts worked. I could however quote the figure of £100,000 per annum as the order of magnitude for this charge. I said that the other main element in annual costs would be the cost of staff. Here it would be appropriate to take the cost of the additional effort over and above that of the staff to be transferred from Harwell. Again, no precise estimates have so far been made but a figure of £50,000 per annum would give the right order of magnitude.

/I

D. de B. Jones, Esq.,
Office of the Minister for Science,
2, Richmond Terrace,
Whitehall, S.W.1.

I am sending a copy of this letter to Fogarty at the Treasury.

Yours sincerely,

(H. J. Millen)

As regards the printers, I explained that the results of the calculations had to be reproduced in printed form and that this was the function of the printers. It seemed reasonable to have a second printer in a big installation, if only as a standby; and I now add that there may well be a need for subsidiary printing operations. (Slightly amended copy.)

I assumed you that there would definitely be a need to inter-
change information between the Atlas and our IBM machines either at
Kilger or at Aldenast, and that the provision of a tape unit for
such interchange was not merely a possibility.

I explained that the figure of 50,000,000 was a very rough estimate and that we could not give any breakdown between the two components of it.

For as we could see there would be none.
 and capital expenditure of significance and I assumed you that as
 You asked whether we expected that there would be any increase

As regards running costs, I said that "Kerenti" had not yet made any detailed estimate of the maintenance charges and that this charge would of course depend upon the number of shifts worked. I could however quote the figure of £100,000 per annum as the order of magnitude for this charge. I said that the other main element in running costs would be the cost of fuel. Here it would be impossible to take the cost of the additional effort over and above that of the shift to be transferred from Harwell. Again, no precise estimates have so far been made but a figure of £50,000 per annum would give the right order of magnitude.