## Tripreport E.W.Dijkstra, Valley Forge, 28 Oct. - 2 Nov. 1978.

Such short visits are against our principles. When I accepted the invitation, it was for late spring, and I had organized a combination with two other visits overthere. Then the course in question was postponed until late October, when a longer absence was inconvenient. Hence.

I left Amsterdam on Saturday around noon in a fully packed Boeing 747, in which any form of work --in particular: further preparation of my talks-was made impossible by a very talkative neighbour. (He had some colleagues in the plane, and I had almost my only moment of peace when he went over to them for a chat. Upon his return he told me that one of his colleagues had asked him "Do you know next to whom you are sitting? Dijkstra!".) At J.F. Kennedy I had several hours to kill; I shared them with Frans Peters who was in the same position. He told ne about his work done while at Ispra (beating, by avoiding the use of sparse matrices, the widely used packages ICES --Integrated Civil Engineering System-- and GENESIS --undoubtedly an acronym for something similar-- by a factor of 50, as he needed only 2 per cent. of the computation time those packages needed; I was impressed). Upon my arrival at Philadelphia, the man from Burroughs that would collect me was waiting at the gate and recognized me immediately from the description given. (Beard, shoulder bag, and sandals do have advantages!) An hour later he delivered me at the Sheraton-Valley Forge, and I went to bed and slept soon thereafter. At Schiphol Airport I had broken the glass of my watch (by dropping it on the tiles of the departure hall while queueing in front of the check-in desk), and my talkative neighbour had somewhat spoiled the crossing; otherwise a successful journey.

The return trip on Wednesday started very successfully. At 15.00 I was collected at the hotel. I shared the car to the International Airport with mr.Leebrick --a Burroughs Vice-President-- and that was very fortunate as I could ask him about a McLean-based company I needed to know more about. The flight to New York was smooth. But then it went sour. When  ${f I}$  tried to check in the girl at the KLM desk said that "the computer did not know me". I told her that I had confirmed my return flight last Saturday at the KLM  $\,$ desk in the arrival hall, and had done so with a witness (Frans Peters as a matter of fact). I refused a stand-by statues with some further threats, and eventually was admitted when the man at the desk next to her had retrieved that the computer did know a certain --or: uncertain-- "C.W.Dijkstra", also booked through to Eindhoven. Due to the late arrival of the incoming aircraft my total stay at J.F.Kennedy was five-and-a-half hours. The Boeing 747 was, again, fully packed, this time mostly with pilgrims for Mekka: a colourful load, but not noisy during the flight. I slept a little bit, after circling over Amsterdam for a full hour, waiting for the fog to clear up, we landed. Thanks to the fact that I traveled with cabin luggage only (4 kilogram) I was just in time for my connecting flight to Eindhoven, which was cancelled.... (The girl of the NLM who told me this was most uncooperative and glaringly incompetent; I lost my temper and almost told her to try a job in New York.) I came home somewhat late, very tired, and not in the best of moods.

On Sunday morning I walked from the hotel to the shopping centre of King of Prussia (and back) where I found in a drugstore what I had promised to buy, the afternoon was spent on preparation, late in the evening I had a very good dinner (Dover sole) in the pleasant —and informative!— company

Management Development" started (unhampered by the fact that I cannot parse its title). I addressed one group from 8.30 until 12.00, a next group from 14.00 until 15.30, and on Tuesday I spoke from 10.30 until 12.30 to the third group. I was not fully content about my first performance: the audience was very passive and failed to give me the feedback that I needed so badly because it was an unfamiliar audience for me. (I thought that their lack of reaction was my fault, but later I was told that it was always that way at the beginning of a course.) The next two talks —thanks to some much appreciated feedback that mrs.Carol Spain, the organizer, provided during lunch— went (as far as I was concerned at least!) almost perfect.

It was great fun to explain for a mixed audience —half software, half hardware— the fatalness of what, for historical reasons, is known as "Joseph's Blunder". (The name "Joseph's Blunder" is given to the following line of reasoning. "While the hardware is getting more and more reliable, we observe that the software is getting more and more unreliable. Thank goodness, the hardware also gets cheaper and cheaper, so that it becomes now economically feasible to build many more functions directly into the hardware, thus greatly increasing the reliability." The last conclusion is, of course, absolutely unwarranted: following Joseph's advice would only lead to a greater fraction of the usual oversights being cast in silicon! As most hardware people have only a faint understanding of the mechanisms that tend to complicate software, it was a nice challenge to explain Joseph's Blunder without hurting anyone's feelings —mr.Joseph himself, being employed by another company I am happy to say, was not present!——.)

In the afternoon I had several almost private conversations with different participants. When I had nothing else to do, I listened to the other speakers, thereby learning a lot. In sorting out what I learned I was not always certain whether I was learning things specific for Burroughs Corporation, or whether I was allowed a look inside The American Organization in general. Hence —my tripreports being somewhat public documents—— I shall refrain from further comments here.

Plataanstraat 5 5671 AL NUENEN The Netherlands prof.dr.Edsger W.Dijkstra Burroughs Research Fellow