

Tripreport E.W.Dijkstra, Detroit, Austin, Philadelphia, 25 Nov.-9 Dec. 1978.

I left home at 8.45 in the morning, when my wife took me to the Eindhoven railway station; then with the 9.06 train to Amsterdam, where I caught the 10.45 coach to Schiphol. I checked in at 11.30, did some taxfree shopping and undertook my journey to gate D53 --at the far end of one of the spider's legs-- .At noon I was at the gate where I started writing my first letter. At 12.30 through security, but in the plane the hustle and bustle of boarding passengers made writing impossible quickly thereafter. I resumed that letter at 13.30, when we had the clouds beneath us. It was a very smooth flight, for I wrote another two letters and started on a fourth. It was a Boeing 747, half cargo, half passengers, and again all seats occupied. (I wondered whether with this arrangement the passenger/toilet ratio is smaller than otherwise, for at the end of the 8.5-hour flight the flushes still flushed.) It was crowded, I shared a three-seat row with a young couple with one-and-a-half baby. On that flight, as on a few preceding ones, the average Philips employee was much noisier than the average Burroughs one. (Perhaps Philips could give its travelling personnel a quick course on "How do I behave on international flights.", although, of course, it would make flights less instructive for the other passengers. Whenever, in future, people show surprise at my knowledge of inside stories from it doesn't matter where, I have my unbreakable answer ready: "I couldn't help overhearing a flight conversation.". I have rather sharp ears, and it is pretty unbelievable what people reveal when they cannot keep their mouths shut.)

I had plenty of time to catch my connection, so I wasn't worried when the plane landed 30 minutes behind schedule. It took me 45 (!) minutes to get through Immigration and another 25 (!) minutes to get through Customs. (The cross-questioning ended with "What do you do in the Netherlands?"; my answer "Research" satisfied the Customs Officer.) In Detroit, Dr.D.M.Dahm was at the gate to see me to my hotel at the other side of the town; I was grateful for not having to take any decisions anymore: I had been on the road for more than 18 hours, and that is about enough.

The next morning, at the Northfield Hilton, I learned --see EWD674-- what "Hotel non-garni" means. A stoppage in the sewage system having disabled the dishwashers, no breakfast was served. (To be quite precise: they served Muzak without breakfast.) A courtesy coach of the hotel took me to the nearest "Denny's" at 8.45 and collected me at 10.00. After breakfast, waiting to be picked up, I wrote the above section of my tripreport on the backside of my place mat: the quality of the paper was excellent. Denny's place mats can be recommended.

* * *

That Sunday I completed the fourth letter, wrote two pages of serious professional stuff, several entries in my diary, and got very, very cold. When I asked at the desk whether something could be done about the heating, I was told "No, we are saving energy." It was only the evening of the next day that I was told that I had a heater in one of the corners of my room and that I was supposed to switch it on myself. After that, the cold was driven out of my room and I suffered from the noise of the fan instead. ("There is no place like Hilton.") At 15.00 I convinced the superintendent of "The Great Ballroom" that his piano would not suffer if I played on it and, after much arguing from my side --I had to counter objections such as "You see, we pay

quite a lot to keep it tuned."-- I was admitted to the instrument. I hoped that playing the piano would keep me warm. It was a small upright (Kimball), badly out of tune and mechanically in an atrocious condition --several keys did not even work!-- . ("There is no place like Hilton.") After that failure I went back to bed and thought about the shape of polygons of maximum area when the lengths of the sides have been given. At 20.00 --in my body 2 a.m. the next morning-- I was joined for dinner by David M.Dahm and Herbert Stopper, both from Corporate Engineering Headquarters. I went to bed immediately after dinner, and woke up early in the morning, shivering. A hot bath improved the situation.

Monday and Tuesday I gave three lectures, very similar to the ones I had given one month earlier in Philadelphia, again as part of the internal seminar on "Engineering Management Development", and eventually I convinced myself that I am not the right person for such training courses. I have never been subjected to vocational training, I have never trained vocationally, and I hardly believe in it. The differences between vocational training and education, between a presentation and a lecture, are too great to be glossed over.

On Monday evening I had a nice dinner --that is, as far as the company was concerned: the "Chicken Kiev" of the Northfield Hilton was of the purest plastic that even Sovjet citizens would reject as inedible-- with five participants from the Plymouth plant. After dinner, on my way to bed, I made a short note when I discovered the quintessence of the proof I had been thinking about. The next morning I wrote it down, and it became a beautifully simple argument, the structure of which still pleases me very much. On Tuesday evening I had a pleasant and informative dinner with Dr.R.R.Johnson in Detroit's "Renaissance Center" that made a great impression on me: of course it is gigantic, but everything I saw had been done with excellent taste.

Wednesday noon I left the Northfield Hilton (without regret) for Austin, Texas, via Dallas. I was well in time at the airport, but the plane was so much behind schedule that in Dallas I nearly missed my connection. Remarkably enough my luggage made the connection in Dallas as well. Dallas Airport is futuristic, with unattended, computer-controlled cars providing a shuttle service between the terminals. The terminals are placed so far apart that walking is impossible; the ride was very bumpy (in all directions) but cost only a quarter. At the entrance of the plane to Austin I joined D.M.Dahm, with whom I visited the CSG outfit in Austin the next two days.

Early in the evening --we had switched from the Eastern time zone to the Central time zone-- we arrived in the Austin Hilton Inn, which was even worse than the one in Northfield. We had dinner in the restaurant (named after a Texan senator, and to give you some idea of the Texan sense of humour: the toilets were marked "Senators" and "First Ladies"), full of nostalgia, wood and leather being made of plastic. The food, for a welcome change, was quite good, but before we had finished our meal, conversation became absolutely impossible, as the restaurant was in open connection with the bar, and the live music in the bars of Hilton hotels is always deafening. Even by the standards of the American Dahm, the noise was offensive.

The next day we talked with the little group in Austin, a discussion which was a great pleasure as they were of high calibre. At 17.00, having taken notes all day, I was tired and suggested that we called it a day. In

the evening I had a nice dinner (in "The Treehouse") with five people from the Department of Computer Science of the University of Texas at Austin: three of them I had met before. Between the soup and the main course their expert on complexity theory, who met me for the first time in his life, probed my solving ability by posing me a problem that, indeed, I had never seen before. I was lucky, as I saw a solution almost as fast as he had ever witnessed before. After having thus established my credentials I could enjoy the main course. Again the food was good. This time we had finished our meal before the heavily amplified live music drove us out of the establishment.

The next morning we returned to the little CSG group, which we left at 15.00. The plane to Dallas was late and I hope that Dahm, whose connection was a bit tight, got his plane to Washington. I had plenty of time to catch my connection to Philadelphia where I arrived at 22.45. I was met at the airport by Jim Murtaugh and his wife who invited me for dinner at their home for the next evening. I was glad they were at the gate, for I was genuinely tired: we had made long days, and, as my task in Austin was a many-sided one, I had been as alert as possible.

I had escaped Hilton and was now at Stouffer's Hotel in Valley Forge, which is much less obnoxious: here I had in my room at least a table at which I could write comfortably. It was here that I had my first two nights of sufficiently long and untroubled sleep.

Saturday was a bad day; when I woke up I felt feverish. I spent the daytime writing my report on the visit to Austin; while doing so I had the pleasure of observing that I had not made my notes in vain. The feeling of having fulfilled my mission reasonably well gave me some satisfaction. Independently of that I accumulated such a headache that I had to fight it with Aspirin. Headache and fever had gone by the time Jim Murtaugh picked me up for dinner. The Murtaugh's had three daughters at home; an Australian couple had been invited as well, and I had to explain to the youngest daughter the meaning of the word "minority".

Sunday I spent on the preparation of the next week, during which I gave a very technical course on programming for 21 employees of Burroughs Corporation. From 9 till 12 in the morning and from 2 till 5 in the afternoon, until Friday noon. It was more than five years ago since I had given such a one-man show for the last time, and I was a bit tense, uncertain as I was whether I was still up to it physically, and whether I would be able to stand the tension. But my fears were unjustified: evidently my condition was better than I had suspected, for all the week I stayed a safe distance away from the breaking point.

The course, I am happy to say, was a great success. (I am the more happy because it had been organized on my request!) A great part of the credit goes to the participants, whose days were even longer as they were given homework as well. They were all college graduates or university graduates, more bachelors than masters and no Ph.D.'s. It would have been easier for me if they had had more formal education, and several times I overestimated either their knowledge of science in general, or their agility in coping with different formalisms. Whenever I did so, however, I got the necessary feedback, i.e. the request to re-explain or to slow down. Thanks to their flexibility and their active co-operation the participants formed an audience

that was a pure joy to address. In the opening session I had announced that during this week we should travel "long and far"; at the end of the week I could conclude that, indeed, we had done so.

Apart from the fact that the material discussed was sometimes technically difficult, the message was, of course, also psychologically sometimes hard to swallow. All these people were professional programmers with between several and quite a few years of experience. Before they came to the course they may have felt themselves to be reasonably competent, and after the first example they found themselves suddenly reduced to the stage of beginners. That is tough! But they all took it admirably, and I admired them for it.

Besides my own material I had with me a collection of 20 exercises that Wim Feijen had compiled for the occasion. It was a lovely collection, but, again, many of the exercises we tried were for quite a few a humiliating experience. I would not have been surprised at all if some of the participants would have gotten frustrated to the point of revolt. But nothing of the sort. Whenever it was afterwards shown that by just sticking to the rules of the game a simple solution could be derived in a straightforward manner, they were delighted: they loved the collection for which a lesser audience would have hated its author. I took one copy of the collection back with me, signed by all the participants.

The extremely smooth organization of Stouffer's Hotel deserves to be mentioned. On several evenings the room we used during the day time was used for other purposes, but each morning, when we returned, it was again in the state in which we had left it.

* * *

There were all sorts of activities going on in the hotel, the most noticeable one being a meeting of several days of a Doberman Pinscher Club, which organized daily in one of the public areas a cocktail party --at 11 o'clock in the morning!-- . No free drinks for other guests, because the members of the club had to drink their cocktail in the company of their dog (or dogs). The dogs shared the hotel rooms with their owners, and the last night I did not sleep too much: in the room next to mine --from which I was only separated by a door-- a few female club members clearly did not need too much sleep that night. The dogs, on the whole, were beautiful.

The flight back was smooth; the KLM plane, remarkably enough, was not completely filled up. During the picture I slept a little, we landed at 7 o'clock in the morning. Ria was with the car at Schiphol Airport and at 9 o'clock we were home and walked together with our dogs before I went to bed to get a few hours sleep. I slept a few hours after dinner, and after a long night I was back to the European rhythm.

11 December 1978

Plataanstraat 5
5671 AL Nuenen
The Netherlands

prof.dr.Edsger W.Dijkstra
Burroughs Research Fellow