

Trip report E.W.Dijkstra, W.G.2.3 Meeting "Boldern" 28th April - 3rd May 1974

Characteristic for this traveller's life is the fact that this trip report is written on board of a KLM Boeing 747 taking me from Amsterdam to Chicago. The traveller's life, however, is not without pitfalls.

On Sunday 28th April 1974 I went to Boldern near Zurich. At the Eindhoven railway station my train to Amsterdam was announced at the usual platform. When I was aboard the train, had settled myself nicely and was on the verge of getting lost in my thoughts, a voice over the sound system announced that I was now in the train heading for Tilburg! I picked up my coat in panic, jumped out of the train --in the mean time the announcements on the screen had been changed!--, found out where the train to Amsterdam was expected to leave now, only to discover that I had left my luggage in the Tilburg train that I had left in panic! I managed to retrieve it before that train had left the station, I even caught my train to Amsterdam and by the time we passed Vught my heart rhythm was back to normal.

When I checked in at Schiphol Airport I discovered that the travel agent had not booked me on the four o'clock plane as ordered, but on the plane leaving Amsterdam at nine o'clock in the evening. Almost unpleasant surprise; in my capacity of stand-by passenger --a miserable position, one feels oneself an outcast, a refugee, a third-class citizen-- I have done my best, but to no avail. Schiphol Airport is, of course, an absolutely exciting place, but yet.... I did some writing, had two beers and an "uitsmijter", and was well in time at the gate for the next Swiss Air flight to Zurich, which departed dead on time. I arrived at Kloten, Zurich Airport, doubtful as to whether public transport would still take me to Boldern. When a taxi driver told me that the distance was less than 18 miles I opted for a taxi; the next time in Switzerland I shall ask that question not in the dimension of distance, but in the dimension of money: upon my arrival even my Swiss host --who had stayed up: most of the participants had already gone to their rooms-- was shocked when I told him the amount.

The meeting of the IFIP Working Group W.G.2.3 on "Programming Methodology" was held in "Boldern", a conference place near Zurich that had been selected by Niklaus Wirth. It was ideally suited to the purpose: we had small two-bed rooms with a desk and a sink, common toilets and showers, simple but excellent meals and the whole thing was run on an idealistic basis (if you took a beer or a small bottle of wine, you were supposed to drop the coins in a bowl). Besides that it had a few excellent conference rooms, one even with a decent blackboard. Prepared for a beautiful view --Boldern is half-way up the mountain slope-- I had taken my binoculars with me (in my handluggage! it was quite a sacrifice of space), but we had fog all week, the other side of the lake was hardly visible. Well, not all one's kite can be supposed to fly....

Compared with our previous meeting --Blanchland, near Newcastle, last October-- we had a huge attendance, observers included about 25 persons (of about 12 different nationalities: it was a truly international meeting). And it was perhaps exactly this larger participation that made --at least for me and a few others who could compare-- this meeting less exciting than the previous one. It was a mixed lot. (To some extent Brian Randell --who was absent this time and therefore could not observe the consequence-- who likes and loves "the clash of opinions" has been responsible. I remember him, with a justified fear for inbreeding, urging for variety of backgrounds. Sometimes I now fear that he has overstated his case, as he had certainly

done in arranging the NATO Conference on Software Engineering Techniques in Rome, 1969, a conference that was of an unrivalled misery! In Boldern we had a faint echo of that...)

I observed various forms of scientific paralysis. A few of our (full-time) university types --and they are by no means the worst ones: they do have standards, they do want to sift in deciding what to present-- yet made the impression of having made their courses their standards of relevance. If something was too difficult for their average students, if their administration would not allow it, their first reaction was to turn away from it. This was particularly true in the case of our best-known language designers: they too had accepted political pressure as a fact of life to the extent that they could sometimes hardly bring themselves even to consider suggestions that they considered as "heretic". I do not blame them, for I have some idea of the agonizing intrigues they have gone through in order to get their product more or less accepted. Yet I would rather remain aware of the scars. One American academic had reacted quite differently: he had opted for Artificial Intelligence work in connection with the NSW --"National Software Works"--, ARPA's new grandiose project that is intended to prolong the glory of the ARPA-net. Even if one did not know ARPA, the name "National Software Works" is enough to make one somewhat suspicious. He gave to wishy-washy salestalks on how grand it was all going to be, failing to convince us both of the project's desirability and its possibility. It left a very dirty taste in my mouth and it becomes very hard to be more explicit about one's impression of ARPA under the constraints that the words "fraud" and "corruption" are to be avoided. As far as the project was described I can only describe it as "a simulation project", viz. the simulation of a research project. Its advocate was quite sure that it was a true research project "for it was not a priori sure that they could do it!" A most amazing argument that would place all incompetent development in the ranks of research. My misgivings about Artificial Intelligence --which had already grown into more solid misgivings by the reading of Sir James Lighthill's report-- have been reinforced. In a few years time AI-addicts will call me "prejudiced".

Personally I had no reason for complaint, nor regret. Both within and outside the official hours I have shown what I wanted to show and have asked what I wanted to ask and have received as much feedback as I could hope for. On Monday afternoon I have spoken on "Some Engineering aspects of the programming task", using the design exercise as described in EWD408 as an example. O.- J. Dahl reinforced my feelings that the replacement algorithm should not be terribly important and suggested a "randomizer" as a means for avoiding systematic mis-behaviour. I had never thought about that and was grateful for the suggestion. In a discussion it transpired that I had guarded against unjustified growth of the window size, but had failed to detect "justified shrinking" under unfavourable circumstances. The lesson is taken in gratitude. From Both Ross and Seegmüller I hear that their people had gone through the literature and the suggestion about the T/C-ratio (and its motivation) both seem new. On Monday evening I gave a quick talk --i.e. two hours-- on guarded commands and the calculus for the derivation of programs, just to bring my co-members in the picture --the first half was a second exposure for those that had attended the Blanchland meeting. On Tuesday evening I have exposed my array exercises to a small group in Niklaus' room --the discussion was continued at the closing dinner on Thursday evening--. In the mean times we had Barbara Liskov's paper as supplementary material for comparison and although not all my questions have been answered, some are and I have a clearer insight in the issues

involved. Rewarding. On Wednesday evening I had a long talk with Rod Burstall, whose lecture I had liked: his "derivation" of the repetitive Fibonacci generator was quite impressive; that evening I went with him in greater detail through a few of my derivations. They continued to hold water. On Thursday afternoon --a free afternoon scheduled for a trip that was cancelled on account of the fog-- I spoke in my room for two hours with the NSW-guy --in his salestalk he had said nothing, that afternoon he showed me that there was, indeed, nothing behind his smoke-screen of impressive jargon and bad syntax--, thereafter I had a long discussion with mr.Nori, an observer from India. A nice lad who made a very sensible effort of raising the confidence level of a compiler. Given the time, he might do a nice job; a considerable amount of water has still to stream through the Ganges, but I am not worried. After the NSW-guy he was refreshingly solid and modest.

Cliff Jones gave a short talk, as an act of "verbalizing" it was not a very good one. Yet it was helpful, at least for me, for it made me realize that my recent experience with the problem of the strong components is a perfect example for my judgement that an automatic implementation of a program expressed in terms of sets is currently a foolish goal for other than "quickies". So much for Courant Institute's SETL --if I am well informed-- and also (I am sorry to say) to a certain extent for Barbara's efforts.

1st June 1974

Burroughs  
Plataanstraat 5  
NUENEN - 4565  
The Netherlands

prof.dr.Edsger W.Dijkstra  
Research fellow.