

TRAVELS WITH CHARLIE

Barry Clark

John Steinbeck wrote a book called Travels with Charlie about a trip through the USA in a camper (in the days when this was unusual) with a large dog named Charlie. He claimed that having this non-hominoid companion enhanced his appreciation of the country by forcing him to make more varied contacts than if he had been traveling all by himself. For this purpose, however, I shall now proceed to demonstrate that a dog is less effective than a Rubidium vapor frequency standard (i.e., a clock). This is the story of how I carried the time to the Crimea for the May 1971 VLB experiment.

My friend, the clock, is a fairly modest suitcase, made by the Hewlett-Packard Company with wonders of quantum physics, micro-wave engineering, and digital logic packed tightly into its seven inch chassis, weighing something under forty pounds. Modest also is its demand for some thirty-five watts of continuous power. After all, you can light only a rather dim light bulb with this sort of power. Note, too, that nicad batteries have a very high energy storage capacity per pound of weight. So, though the pounds are beginning to mount up, you must realize that thirty pounds of batteries are indeed a minimum requirement for a ten hour portable power supply. Mike Balister's battery charger is not an excessive weight--it has a transformer in it, of course, but all the circuitry is fairly light transistors. And the fact that I felt it necessary to take a 60 cycle inverter to run the whole works from an auto battery was my own decision, of course. We perhaps could have made a lighter packing case for it, of sheet metal rather than wood, but we didn't realize how heavy the wood one was until it was made, and then it would have taken too long to make a metal one. So, despite the miracles of modern miniturization, I found myself with a seventy kilogram clock package. While I still outweighed it, not by that much. (A German acquaintance referred to it as "Ein drei-Man Uhr"--a three man watch.)

Anyway, the plan was to ship Charlie to Europe cold, warm him up there, fill him up with time, and cart him off to the VLB experiment before all the time could leak out. We planned to do it this way because the dir-

ect New York-Moscow flights take too long for Charlie's batteries to keep him warm, and we felt it would be easier to wake him up in Europe than to make the special arrangements for him to have something to eat on the airplane. So, since I would be in Europe anyway, I planned to visit two new instruments--the Westerbork Synthesis Radio Telescope in the Netherlands, and the 100 meter telescope near Bonn, Germany. Nobody in Holland seems to know what time it is (I had George Miley ask), so I planned to fill Charlie with time at Bonn, where I was told they knew the time from measuring the Norwegian Sea LORAN emissions.

So, one Friday I put Charlie on an airplane for New York, where he would wait for me to arrive the following Tuesday. And arrive I did. Asking at the National Airlines ticket counter where their airfreight depot was, I had the good fortune to encounter the nicest man in New York. He was a National Airlines passenger service aide, and he gathered up a company station wagon, drove me over to their airfreight warehouse (where we found Charlie with his "This Side Up" arrow pointing straight down), drove me and Charlie over to Pan-American airfreight, waited around while I handled Charlie's paper work, and drove me back to the passenger terminal, and refused a tip for all this.

From a sample of two, I make the following generalizations about trans-Atlantic flights leaving from Kennedy Airport: 1) They leave three hours late, 2) New York is overcast but Boston is clear, and 3) The movie projector breaks down half-way through the movie.

I was met at Schipol Airport near Amsterdam by George Miley (who had been waiting since the scheduled arrival time), and carried off to Leiden. I phoned Pan Am airfreight and found that (a) Charlie hadn't arrived yet, and (b) yes, they were open on Saturday mornings and I could pick up Charlie then. So I settled in for some sightseeing and talking at the observatories in Holland.

Then came Saturday morning, when I went out to Schipol to rent a car and pick up my clock. Disaster . . . While I had told the Pan-Am man in New York to have Charlie held at Schipol Airport, I didn't check to make sure he had written it on the papers. He

--continued, next page--

had not. Pan Am, noting the University address I had given, had given Charlie to the usual customs agents for the University. And they said that the box had been shipped by train to Leiden. While trying to call somebody at the Leiden railroad station, I encountered Harry van der Laan, who promptly gave up his afternoon for the search. We eventually found the man in charge of freight at the railroad station, and he let us in to search the freight shed, but no Charlie. Impasse. Nothing could be done until Monday.

I had told Ivan Pauliny-Toth that I would drive in Saturday evening, so I got on the telephone to tell him I wouldn't be there. But nobody answered the phone at the Max Planck Institute. (And apparently not at the Sterrenwacht Te Leiden, either. Ivan was trying to call me.) So I then spent an interesting hour with the international information operator. Everybody I knew at Bonn either had no listed telephone number (Pauliny-Toth, Churchwell, Goss) or there were several listings with the same name (Mezger, Stumpff). I gave up.

Monday morning, the customs agents found Charlie, sitting in Schipol Airport. I drove over and picked him up. Dutch customs didn't trust me not to sell Charlie on the local rubidium clock black market, so they wrapped his box with string, sealed the string with lead seals, and told me not to open him except in front of a customs official. So I plunked him in the trunk of my rented Opel, and drove off to Bonn.

Tuesday morning, Ivan and I went to the customs office in Bonn, taking Heinz Wendker with us as an interpreter, to see if they would let us open up Charlie and fill him up with time. They said they didn't really approve of such activity, but we could if we posted a bond equal in value to the clock. When I said I didn't happen to have \$3000 in cash with me, they said we should see a bonding agent.

So we went to see a bonding agent. He said it was all very irregular, and that, though he was sure we were not smugglers, if we were, it was a most ingenious way to go about it. He would, however, bond us if we left a deposit of merely \$2500.

Back at the Max Planck Institute, Heinz looked for somebody who was familiar with customs procedures. We found such a man, and he was able to make an arrangement by which a customs agent would go with us that evening

to the telescope, watch us open the clock, and reseal it the following morning. It was now clear that I wasn't going to make it back to Amsterdam for my early morning flight to Moscow. So I called Schipol Airport, cancelled my reservation for Wednesday and made a new one for Friday. I also sent a telegram to Moscow, telling Leonid that I was not coming Wednesday. It got there Thursday.

Anyhow, that evening, we opened Charlie up, with the Customs Official there to certify that he wasn't full of marijuana or diamonds. We plugged him in, warmed him up, and filled him chock-full of high quality time. We sawed an air hole in his box, through which passed his power cord, and the following morning early, we took him to the Customs Office, had his symbolic string with lead seals wrapped around him again, and had his accompanying papers stamped and initialed.

That day I attended the dedication of the 100 meter radio telescope, whereat 600 people were treated to speeches, guided tours, and a lunch of pea soup, two beers, and one schnapps. But, that night, again disasterIn carrying the clock from the telescope back to the Institute, the symbolic string had hung on the trunk latch and snapped. Recalling in vivid detail the history of German jurisprudence from Wallenstein to the Nuerenburg Trials, I went screaming for help to Heinz Wendker, who prevailed upon Herr Zann, who in turn was able to persuade his customs official friends to reinstall the string without jailing me in the process. This they did on my way back to Amsterdam Thursday morning. I got back to Schipol Airport at about 4:30 in the afternoon, just as the customs men were leaving. The man left on duty couldn't process Charlie's papers, but they did let me put him in bonded storage, plug him in, and cut the symbolic string to flip his battery charger to high.

I got back to the airport at 8:30 the next morning, figuring that was about right to unsnarl the paperwork to catch my 1 PM flight. The Customs Officials were there in force by that time. But, Disaster The German customs agent should not have stamped and initialed Charlie's papers, but should have kept them and issued a new set. The Dutch customs agents set to work to unscramble things. I told them that if they

--continued, next page--

needed me, I would be in the waiting room next door, and got out my book for a little reading.

At 11 I went back to the Customs Office to see how things were coming on. Disaster . . . The lack of a document from Germany had been overcome, but meanwhile, they had found that Charlie was on the strategic materials list. They, as a signatory to the NATO could not let such an item go to Moscow. Meanwhile, they had forgotten I said I would wait next door in the waiting room, and had called all over Holland trying to find me. I produced a copy of the US export license, which said we could take Charlie to Russia (I had left another copy with the clock, but they didn't think to look there). They considered this item awhile. Then they decided it was not sufficient, since it was a xerox copy, with no rubber stamps (except a xeroxed one) or initials. They would call the US Embassy in the Hague to find out what they should do. They predicted that The Hague would call Kennedy Airport, where the export license original was. But anyway, the appropriate man to ask at the Embassy was out to lunch.

After waiting an hour and a half, The Hague called back, and the American at the Embassy chatted with me a while, learned that I did not profess to be an atomic spy, and told the Dutch Customs to go ahead and honor my xerox copy of the export license. The formalities completed, we walked out into the waiting room to the big window and watched my airplane take off.

Meanwhile, back at the airport, I made a new reservation, and sent a telegram to Moscow, telling my friends there that I would arrive on Saturday, not Friday (the telegram arrived Monday).

--continued, next issue--

NEW NSF HEAD

President Nixon has chosen Dr. H. Guyford Stever, President of the Carnegie - Mellon University in Pittsburgh, Pennsylvania, to become the next director of the National Science Foundation. He replaces Dr. William D. McElroy who is leaving NSF to return to the academic world.

GREEN BANK BOWLING¹

At the time this article was written, the Monday night team had bowled 64 games. Of these 64 games, they won 28 1/2 and lost 35 1/2 (1/2 game was a tie). This is better, they say, than they did for the same period last year. Wendell Monk with 220 has bowled the highest scratch game and the highest scratch series with 627. High games (scratch) and high series (scratch) scores for members of the Monday Night team follow:

Monday Night Team

<u>High Game</u> (Scratch)	<u>High Series</u> (Scratch)	<u>Name</u>
220	627	Wendell Monk
210	563	Jon Spargo
201	494	Howard Brown
200	513	Don Hovatter
187	477	Bob Vance
185	503	Bill Radcliff
184	460	Herb Hanes
140	369	Ron Weimer
137	388	Troy Henderson

The Tuesday night team has bowled 72 games so far. They have won 30 and lost 42 - about as well as they did for the first half last season. So far Russ Poling has the high game (scratch) with a 220 score. Russ also bowled the highest scratch series on the same night - 536. High games (scratch) and high series (scratch) scores for members of the Tuesday Night team are below:

Tuesday Night Team

<u>High Game</u> (Scratch)	<u>High Series</u> (Scratch)	<u>Name</u>
220	536	Russ Poling
204	525	Leroy Webb
202	476	Don Stone
197	474	Bill Vrable
191	446	Dave Williams
189	483	Wally Oref
183	468	Harold Crist
178	456	John Matheny

¹Statistics compiled by Don Stone.
