

DR. SETI'S STARSHIP

Searching For The Ultimate DX

Remembering Sir Arthur C. Clarke

The official obituaries have already been written most eloquently. This is a personal remembrance of Arthur Charles Clarke—science-fiction author extraordinaire, advisor to The SETI League, life member of AMSAT, and the world's second greatest communications engineer—who passed away on March 18, 2008 at the age of 90 of complications arising from post-polio syndrome.

Although Clarke had a direct influence on my entire career, and we corresponded from time to time, I did not actually meet him until January 2000. It was a memorable meeting (more about that later). The first Clarke science-fiction novels I read (in high school) included *Childhood's End* and *Prelude to Space*. However, it was his brief article "Extraterrestrial Relays" in the monthly radio journal *Wireless World* that had the most profound early impact on me.

In 1961 I was a high school student and a radio ham, and the youngster sitting in the back of the room at Project OSCAR meetings watching my mentors design and build the world's first non-government communications satellite. I remember thinking, "This is what I want to be when I grow up." We had read Clarke's seminal article, and (although OSCAR 1 was a low-orbiter) we were already thinking about the geosynchronous orbit that he "invented" back in 1945.

Fast forward to the early 1970s. I had become an aerospace engineer and was running a small Silicon Valley microwave company, developing receivers for the first geosynchronous Earth imaging and communications satellites. I had a small (16-foot, gigantic by today's standards) satellite TV dish in my back yard, and read in *Coop's Satellite Digest* that Clarke himself had a similar dish perched on the balcony of his Colombo residence.

That Clarke lived in Sri Lanka bore a certain technological irony. Because the Earth's center of mass is not at its geographical center (ours is a lumpy planet),

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The author visiting Sir Arthur in his Colombo home, January 2000.

even perfectly circular satellite orbits tend to decay over time. From the Clarke Belt, if active station-keeping is disabled (or if the satellites run out of the hydrazine fuel burned by their thrusters), the birds tend to drift to the "low" point in their orbit, a stable resting point over the Indian Ocean. This satellite graveyard was well in view of Arthur's 5-meter dish, so I like to think that the dormant geosats were all going home to papa.

In 1979 (by now an engineering professor), I happened to be in Hawaii touring the Comsat telemetry, tracking, and control (TT&C) station on the north end of Oahu. My host showed me a brief PR film called "Pathways to the World," narrated by none other than Arthur Clarke. There was a scene showing him standing under his dish, and I thought this would be a great thing to show my students. I asked the Comsat people how I might obtain a print of the film. "Do you have access to an Intelsat terminal?" I was asked. I did indeed (my old homebrew 16-foot dish and C-band receiver). I was given a satellite name, and a transponder number, and a time about a week hence.

When I arrived home on the mainland, I aimed my dish and tuned my receiver appropriately and videotaped "Pathways to the World." How's that for appropriate use of Clarke's technology?

I've since shown that tape to a couple of thousand students and still cherish it in my video collection. Following the US Congress canceling the NASA SETI program in 1993, several organizations (including the nonprofit, membership-supported SETI League) emerged to fill the void. I was tapped as The SETI League's Executive Director, and one of my first tasks was to recruit luminaries to serve on our advisory board. Arthur accepted graciously, without hesitation. I enjoyed our rich e-mail correspondence over the past several years, touching sometimes on SETI matters, sometimes on communications technology and science, and sometimes on science fiction. When I went on a lecture tour to India in 2000, Sir Arthur kindly invited me to take a side-trip to Colombo and pay him a visit.

Arriving at the Galle Face Hotel in Colombo, I saw a familiar face in the lobby—Arthur's brother Fred, whom I

had met in the UK a few years prior. Not only did I not know we were staying in the same hotel, I had no idea Fred was in Sri Lanka! That's how small a world we inhabit, and Arthur helped to make it so. Fred's wife Babs had died just two months earlier, and Arthur came to visit his brother and to mourn. Fred and I stayed up most of the night, sharing songs and poetry and reminiscing about this elegant woman who had dazzled me the one time I met her.

The next day it was off to Arthur's home (Fred and I together). When questioned by the hotel concierge earlier as to my business in Colombo (there was a war on, so they asked such questions), I simply said I was there to visit a friend. Then, as I hired a car and gave that same concierge the address, his eyes widened in a mixture of recognition, surprise, and respect. It seems Arthur's house is well known in Colombo!

You may recall that when Isaac Asimov died a few years back, Clarke eulogized him as "the world's second-greatest science fiction writer." That gave me an idea.

Visiting Arthur at his home, I brought a gift, as is customary. It was not the traditional bottle of wine, since I no longer lived in California. Instead, I wrote the song "Extraterrestrial Relays," brought along my guitar, and had a chance to sing it to Arthur, his staff, and his brother. Arthur was delighted and asked for a copy. I was prepared and made him a formal presentation of the original. The sheet music is inscribed "to Sir Arthur C. Clarke, the world's second greatest communications engineer." I heard later that Arthur had framed that page and placed it on the wall in the room of his house that he wryly called his "ego chamber."

Arthur once told me that he would gladly lend his name and support to our SETI League efforts, and that I could feel free to ask him for anything—except money. I respected that request, figuring that his name on the masthead was worth far more than millions in the bank. However, during my one visit to Colombo, he gave me a check anyway, and that's a story in itself:

When Clarke invented the geostationary communications satellite (OK, so some will say that Tsiokolvskii *really* invented it; Clarke merely refined and published it), he coined the contraction ComSat, for Communications Satellite. He contributed the name to the public domain, never expecting such technolo-

gy to emerge within his lifetime. Years later, when the Communications Satellite Corporation was formed, it adopted the trademark Comsat. However, its leaders knew where the term really came from, and although under no legal obligation to do so, they wanted to make a token payment to Clarke, in gratitude. They gave him one share of Comsat common stock.

Over the years, what with stock splits and dividend reinvestments, that one share had multiplied to several, and Clarke began to receive small checks in the mail from Comsat from time to time. I was in his house when one of those checks arrived and just happened to be

talking with Arthur while he was going through the mail. He promptly handed me a dividend check from Comsat, saying, "Here—for The SETI League."

I never cashed that check. It's framed now and hanging on my wall, and some poor Comsat accountant is probably wondering to this day why the company's accounts show a discrepancy of \$4.75.

Now, whenever I look at that check I will fondly remember Sir Arthur Charles Clarke, the world's second greatest communications engineer. Next time I see Fred Clarke, it again, sad to say, will be to mourn.

73, Paul, N6TX

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