ISR 7/2 A. C. Clarke on *Telecommunications* Title 311

Arthur C. Clarke is, after H.G. Wells, the most famous British science-fiction writer of the 20th century. Like Wells, who read biology at Imperial College London, Clarke studied physics at Kings College London, and both let science influence their stories as well as their social conscience. Clarke received many honours from the science fiction community, and on his 80th birthday in 1998 was knighted and is now Sir Arthur.

In 1945 Clarke published in *Wireless World*, his brilliant scientific idea that three satellites in synchronous orbit of 35 700 km above the Earth's equator could, through their radio and television broadcast relays, cover the whole planet as each satellite would remain stationary over the same point on Earth. When in 1965 Early Bird [See Title 108] became the first commercial communication satellite, a new age of telecommunications began. Clarke never patented his idea, and in the following decades communication satellites, the so-called 'comsats' of American origin, were sold world-wide. They spread along the geo-stationary orbit and brought benefits to the Planet Earth. It is a splendid example of the Scientific Temper.

I had known and respected Arthur for many years, always wanted to publish an article by him in ISR and was therefore glad to receive his manuscript "New Telecommunications for the Developing World", so appropriate as Arthur had lived in Sri Lanka since 1956. In his article, published in June 1982, Clarke foresaw that direct broadcasting satellites in synchronous orbit would bring the greatest benefits to the developing world, as they would spread television-education to rural areas easily and cheaply. He referred to Vikram Sarabhai and Yash Pal, the two Indian scientists who had in 1975-76 proved the possibility of such education with the American NASA satellite ATS 6 [see Title 277] by direct television programs to 2400 villages.

Unfortunately, so Arthur told me recently, this experiment had not been repeated and had not found general approval in the Third World. In his article, Clarke quoted Sarabhai who gave the reason for such neglect: "Anything that is innovative is automatically regarded with suspicion. In many nations the Governments are dominated at the top not by technocrats, but by professional administrators, lawyers and soldiers, who are hardly likely to provide the insight, experience and firsthand knowledge of science and technology which are necessary at the decisionmaking level". Clarke added "The only constraints are political and economic, not technical".

Among other benefits for the developing world, Clarke foresaw the world-wide mobile person-to-person telephones, perhaps as small as wristwatches in the new Millennium, which would make the whole human race 'one big gossiping family'. A prophecy fulfilled, but sometimes too noisily!