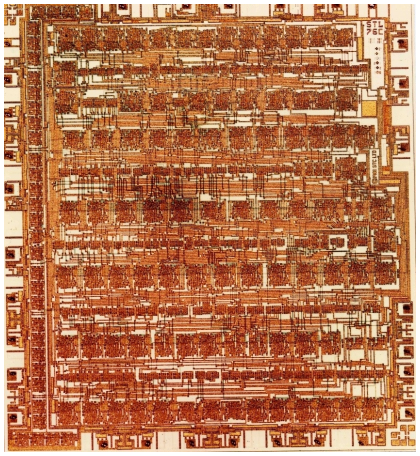
Integrated Radio

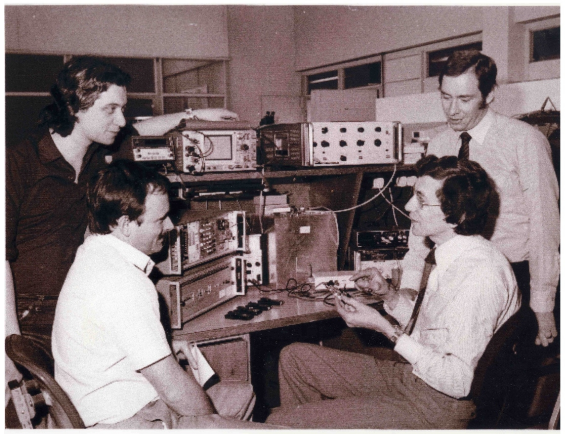
This project was started in 1974 by Dr Joe Reed from ITT New York HQ with an initial intention of producing small RF transceivers for “Helmet Radio” -- a military use. In fact it laid the foundations for the worldwide explosion in mobile radio devices by demonstrating that radios could be integrated in Silicon and that by making radio functions digital they could be both integrated and also made programmable -- what is today termed ‘Software Radio’

A World Firsts Programme at STL

1974 Zero-IF and IQ processing rediscovered and applied to Silicon
1977 ‘ERIC’ Integrated Radio demonstrated
1980 World First Radio on a Chip - STC Pager
1981 Time Division Duplex (TDD) patented - now a world standard in LTE
1988 CT2 Cordless Telephone and Phonepoint using TDD
1987 VHPIC 24bit linearity A-D converter - taking digital up towards the antenna
1989 First True Digital Radio -- STR8212

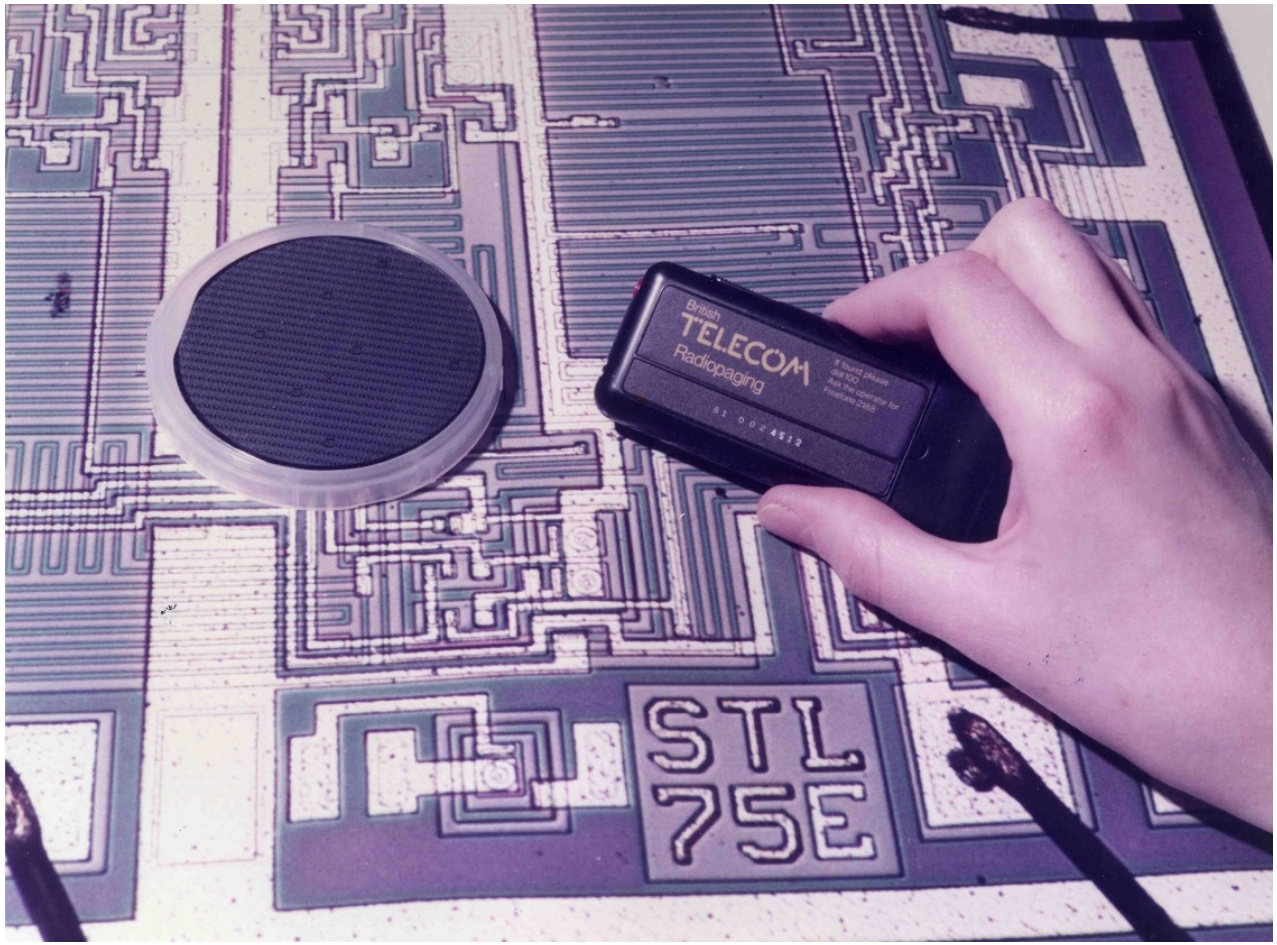


STL76 Digital Decoder chip
for the STC Pager



STL Pager team about 1980
Mike Neale, Graham Barker, Ian Vance, Colin Jeffrey

Integrated Radio -2



1980: STC Pager with radio chip photograph
and 2” wafer(!) of chips (Plessey Bipolar process)

The STC Pager was developed by STL and initially sold to the Post Office for their newly-introduced wide-area paging service. It reduced the number of components in a pager by some 85% and made a very cost-effective design.

This and later models were sold worldwide before paging was overtaken by mobile phones becoming available

They were manufactured in the STC Monkstown plant in Northern Ireland

The product received a Design Council Award in 1982