## **US** satellite system needs \$18n for lift-off

By Robert Temple

American compan \$18 million (£14.4 seeking to million) install satellite million) to install a satellite system which could revolution

nize communications, navigation and transport. About \$7million has already been raised in the private sector for Geostar Corporation's sys-tem which will become oper-ational in the US early next year, with a service for Europe in place possibly by the end of 1987.

The system uses hand-held "transceivers", powered by "transceivers", powered by ordinary pencil batteries, which will enable subscribers to send ordinary two-way telexes, emergency requests for help, and precise details of their whereabouts within a fraction of a second.

They can also establish their legations accurate to within one

locations, accurate to within one their direction and velocity, whether on land, at sea or in the air.

An announcement on the system, which has no govern-ment involvement, will be made ment involvement, will be made later today in America.

The first space components will go into orbit early in 1986, as part of a "G-Star" satellite launched by the French Ariane rocket. Extension to Europe would require further satellite launches

launches. Geostar is the brainchild of American physics expert, Pro-fessor Gerard K. O' Neill of Princeton, who is also President of Geostar Corporation and the Space Studies Institute. He has so refined the technology Geostar that it can now operate by "back-packing" its space components on other people's satellites. Geostar has signed a full businessagreement for 10 years with General Telephone & Electronics, America's second biggest telephone company,

launch its spaace components. The first satellite elements will be completed by R. C. A. Astro-Electronics by September 9, and integrated by November into a G.T.E. satellite.

Estimates of the final cost of the full Geostar project have been about \$300 million, but today's announcement will reveal this has been cut to are estimated \$60 million

This does not count the cost mass manufacture of d "transceivers", handwhich held cost vould eventually 450.