No. 12 FALL 1994

MSAT NEWS

TMI's new 11.1 m Ku band earth station antenna has put MSAT on the horizon both literally as well as figuratively. Allister Pedersen (left) of the Communications Research Centre, who is currently working with TMI Communications on the MSAT project, and D'Arcy Grant of TMI's Customer Engineering are shown holding a small dome-shaped mobile antenna of the type that will be used with mobile terminals.

Launch update

After many years of effort by the government and private developers, MSAT service will soon be a reality for Canadians.

TMI Communications will begin negotiating with Arianespace to set a launch date for MSAT — it could be as early as April 1995 — as soon as vibration testing of the satellite is completed. A number of Arianespace clients are vying for launch time in 1995. Which satellites get chosen for particular dates will depend on each client's readiness and on the firmness of their commitment to a specific date.

Regardless of the launch date for MSAT, TMI has made a commitment to begin offering commercial services in the last quarter of 1995. If the Canadian satellite is not ready for use at that time, the firm will make arrangements to use the American satellite to meet its commitments. ●

MSAT to the rescue

The role of MSAT technology in search and rescue (SAR) operations was discussed at a recent symposium.

The Advanced Technologies in Search and Rescue Symposium was held in Halifax on 28 September 1994.

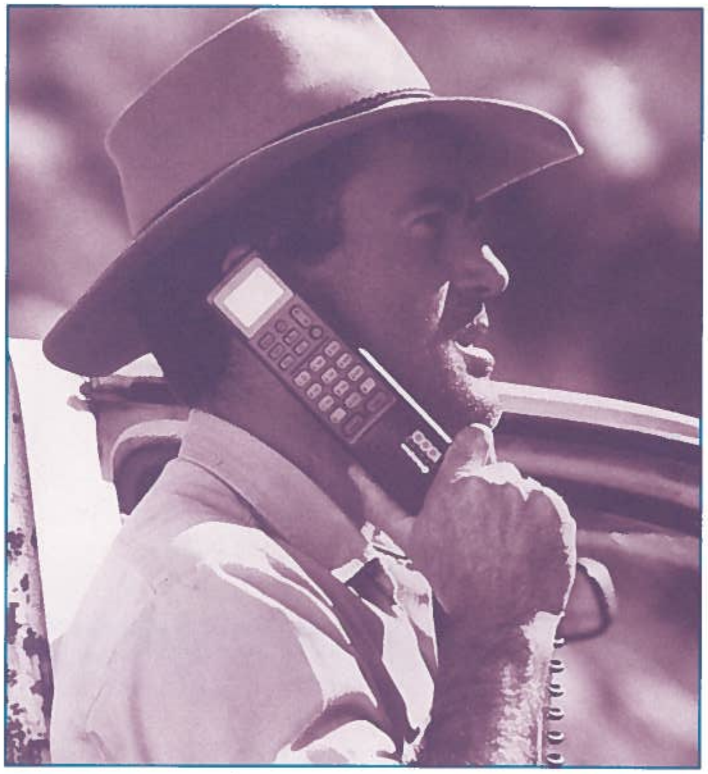
Two common threads ran through the discussions, says Allister Pedersen, Manager of MSAT Trials Planning and Coordination at the Communications Research Centre, who presented a paper at the symposium. The first concerned the use of the Global Positioning System and the second focused on the need for immediate communications with searchers.

Numerous applications of MSAT for SAR, from the initial alert phase through to the closure of a SAR incident, were identified by symposium presenters, who also emphasized the improved communications coverage and reliability MSAT will provide for the aeronautical and marine community. This will allow end users to raise an alert and communicate the circumstances of their distress no matter where they are.

For more information, contact Allister Pedersen (currently working at TMI Communications) at (613) 742-4131, by fax at (613) 742-4100 or on Internet at:

A.Pedersen@tmi.telesat.ca

Copies of the presentations from this symposium and those from a specialist conference on emergency beacons held in October are available from symposium organizer Howard Posluns at Transport Canada's Technical Development Centre in Montreal at (514) 283-0034 or by fax at (514) 283-7158. ●



The Westinghouse Series 1000 phone, which is being tested for use in Australia, will also be available to MSAT customers in Canada.

Westinghouse successfully completes first call

Westinghouse has made a successful test call with their Series 1000 Mobile Satellite Phone System using a satellite system similar to MSAT that is going into service on the other side of the world.

The call was placed over Australia's MobileSat® Network, which is owned by Optus Pty. Ltd., Bellsouth and Cable & Wireless. The tests are being done to ensure that the system, consisting of a handset, transceiver unit and antenna, meets the approval of Austel, the Australian telecommunications regulator.

The call, a major milestone for Westinghouse, was transmitted 36 000 km from Sydney, Australia to a satellite, 36 000 km back to earth, through a public switching network and out through the overseas telephone system to the United States. Reception was crisp and clear on both ends of the call.

Austel's approval was expected in December 1994 allowing Westinghouse to begin delivering the system to Australia in the near future.

For additional information about the Series 1000 phones, contact Westinghouse's Bill Parker at (905) 342-1042. ●

GTIS BRIEFS

GTIS SEEKS INPUT TO HELP DEVELOP SERVICES

Government Telecommunications and Informatics Services (GTIS) is looking at what kinds of next-generation MSAT services it should provide for its government clients.

The initial services offered — mobile telephone, radio and data services — will be the platform for more flexible options to be offered later. For example, "wireless tether" service, in which a secondary transmitter communicates with the MSAT Network through a terminal located nearby, has developed considerable interest in government.

One possible application of wireless tether would have a personal communications device similar to those used with cordless phones as the secondary transmitter. "This type of technology could be a valuable safety tool for law enforcement officers who occasionally must leave their vehicles," explains Al Kingan, Product Director, Satellite and Conference Services at GTIS.

A second application would involve connecting a base station that is not on a direct line of sight from the MSAT satellite with a repeater station that is.

The initial services offered — mobile telephone, radio and data services — will be the platform for more flexible options to be offered later.

Potential government users of MSAT services who are interested in discussing possible requirements for "wireless tether" applications, or other services such as STU-III-protected transmission, can contact Al Kingan by phone at (613) 991-6684 or by E-mail at akingan@ott3.gtis.gc.ca.

PREPARING TO SUPPORT CLIENTS

GTIS has begun a program to prepare its staff to support clients considering MSAT services.

With new technology coming out all the time, it is becoming increasingly difficult for GTIS clients to make choices, explains Al Kingan. It is no longer a matter of shopping for the best price available now; it is also important to consider technologies that may be introduced in the near future.

To adequately serve its clients in this climate, GTIS will put equal emphasis on service and price. The agency is preparing its regional account representatives, with a comprehensive training program and a complete set of support tools, to offer knowledgeable advice about available services and costs to clients. This program is being delivered in four phases leading up to the start of MSAT service in 1995. ●

TMI Communications Update

TMI signs agreement for national dealer network

Glentel Inc., a British Columbia company that specializes in wireless and personal communications, is the first company to sign an agreement to provide MSAT services nation-wide.

The company recently signed an agreement to set up a national dealer network with TMI Communications.

Glentel has extensive experience providing communications services and products. Its activities include distributing, selling and servicing cellular phones, pagers and two-way radios, and providing air time for paging services and two-way radio. The company also offers discount long-distance telephone service to residential and small business customers through 25 000 independent distributors.

Tom Skidmore, chairman, president and CEO of Glentel says the deal with TMI represents a significant opportunity for the company. "We intend to offer customers the widest selection of mobile and fixed satellite service, innovative new service features, convenient and knowledgeable customer service, and dependable and widely available sales support."

New CEO and president for TMI

John Farrell, chairman of NorthwesTel Inc., is the new CEO and president of TMI Communications. He replaces Bob Ferchat who has accepted the position of chairman, president and CEO of BCE Mobile. Mr. Ferchat will remain a member of TMI's board of directors. ●

MSAT Program Office News

IMSC plans firming up

Interest in IMSC '95 (the fourth International Mobile Satellite Conference) is building, and a number of companies are considering participating in the accompanying exhibition.

The conference will be held in Ottawa 6–8 June 1995. Approximately 400 senior representatives of international organizations involved in research, policy and commerce related to mobile satellite communications are expected to attend.

The companies that have expressed an interest in the IMSC '95 exhibition include TMI Communications, Calian Technology, Loral Qualcomm Satellite Services, Inc. and Spar Aerospace Ltd.

IMSC '95
INTERNATIONAL MOBILE SATELLITE CONFERENCE 1995
JUNE 6-8, 1995
OTTAWA, CANADA

The conference will focus on the design, development and application of mobile satellite communication systems. Panel discussions are being planned on user requirements for current and planned systems, features of future systems, the challenges of operating in developing countries, and the regulatory hurdles to deploying international communications systems.

IMSC '95 is sponsored by Industry Canada's Communications Research Centre and the Jet Propulsion Laboratory in Pasadena, California. Information about the conference is available over Internet on World Wide Web at:

http://haagar.jpl.nasa.gov/~pinck/imsc.html

Additional information is also available from:

Lynell Wight
IMSC '95 Coordinating Committee
Tel.: (613) 990-0133
Fax: (613) 990-0316
E-mail: imsc@crc.doc.ca ●

An aircraft of the same type as the one pictured above will carry the MSAT spacecraft to the launching pad in French Guiana. The Antonov 124-100 shown is being loaded with a General Motors JT42HCW Co-Co locomotive. Although the satellite's 8 165 kg shipping weight is considerably less than the locomotive's 112 t, the container it will be shipped in is fairly large — 8 m by 4.1 m by 4.3 m.

Handset Options Provide Flexibility

Mitsubishi Electric will be offering three different handsets for its DiamondTel Series MSAT Communicator™* — including a unit for use with the satellite only, a portable cellular hand-held unit and a push-to-talk (PTT) handset.

The satellite-only handset features a large liquid crystal display, full 10-key numeric keypad and an integrated speaker and microphone. Additional features include separate volume adjustment keys (located on the side of the handset) and three one-touch memory dial keys.

The company is also offering a hand-held unit that can function as both a portable cellular telephone or as a combined MSAT/cellular handset when used in conjunction with a cradle unit.

One of three options offered by Mitsubishi Electric, this unit consists of an MSAT Communicator™ and a handset, which can be used either in conjunction with the main unit to place calls over the MSAT Network or separately as a portable cellular phone.

The third handset variation is the PTT microphone for trunked radio applications. This unit features a full keypad layout plus additional keypad functions such as separate volume control, group selection, an "Emergency" or "Priority 1" override button, call barring and power. It can also be used in combination with either the fixed handset or the portable hand-held unit by users who also subscribe to MSAT voice/data and cellular services.

For more information about the DiamondTel Series, contact Mitsubishi Electric Sales Canada at (905) 475-7728.

* MSAT Communicator™ is a trademark of TMI Communications and is used with permission.

Where does MSAT fit in?

MSAT has a vital role to play in the ever-expanding world of telecommunications because it offers previously unavailable services at a reasonable cost, says Terry Brukewich of TMI Communications.

The use of geo-stationary satellites (GEOs) such as MSAT is only one of an increasing number of telecommunications options for Canadians, says Brukewich. It remains a viable choice, however, because alternative communications networks, using lower-orbit and medium-orbit satellites, are more expensive. In addition, the first networks of this type plan to offer limited services as compared to MSAT, and others won't be ready for launch for several years, he adds.

Much of the potential of this powerful new technology is still to be discovered.

GEOs, such as the *Anik* satellites that bring television signals to many Canadians, are already in use. For satellite technology, these are relatively simple machines — essentially transmission towers in the sky, says Brukewich.

Much of the potential of this powerful new technology is still to be discovered, adds Mukhtar Rahemtulla, Manager, Customer Engineering at TMI Communications.

When considering the initial services planned for MSAT, it is already possible to map out new developments — for example, high-speed fax and digital audio broadcasting, Rahemtulla explains. In addition, he says that opportunities to create new technologies will arise as the market expands.

Rahemtulla has applied to make a presentation at IMSC '95 (see related story on page 3) on some of the lesser known capabilities of mobile satellite communications systems and on innovative ways they can be exploited by corporations. ●

MSAT News

MSAT News is produced by Industry Canada to increase awareness of the MSAT Program and related technologies. It is published on an as-required basis, approximately once every three months. The department will continue publishing the newsletter until the project is completed.

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