

COMMERCIAL AND SPECIALTY

General commercial and specialty printing, excluding trade work and specialized services, was up in value to \$369,419,000 in 1959 from \$344,688,000 in the preceding year. The most important individual items reported by commercial printers, in terms of the value of shipments in 1959 were: newspapers and magazines printed for the publishers, \$29,824,000; continuous forms, \$28,578,000; catalogues, \$21,760,000; printed bound books - fiction, non-fiction, scientific, text books -- \$18,839,000; shipping tags and labels, \$18,220,000; and greeting cards, \$16,611,000.

Trade work and other services were up 11.8 per cent in 1959 to \$68,063,000 from \$57,338,000 in the preceding year. The principal components of this group, in terms of value of shipments, were: photo-engraving, up 5.1 per cent to \$14,433,000; duplicate plates (electro-typing, stereotyping, rubber and composition plates), down 15.6 per cent to \$9,517,000; and trade composition, up 13.2 per cent to \$8,997,000.

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CANADIANS IN SATELLITE PROJECT

Two Canadians are now in London working with British scientists on a joint U.S.-U.K. project that will see two communications satellites in orbit by fall 1962. They are O.L. Britney, Chief Engineer, Research, Development and Programming Unit of the Department's Telecommunications Branch, and his assistant, E.J. Klein. Both are from Ottawa. The team may be expanded later, to include representation from the Canadian Overseas Telecommunications Corporation.

The Canadians, who will live in London with their families for two years, will be active in the research and design of both a ground station and the overall system. They will also assess the project's usefulness to Canada, thereby gaining the "know-how" essential to maintaining Canada's role in international and Commonwealth communications.

Named Project "Relay" and sponsored by the U.S. National Aeronautics and Space Administration (NASA), the experiment calls for one-way television transmission, a number of two-way voice channels and certain radiation measurements to test the survival of components in space. If it is successful, a full-fledged transatlantic system of communication-by-satellites may be active by 1968, permitting many hundreds of overseas telephone calls and other forms of communication to be made simultaneously. It will also permit two-way television transmission, bringing instant Eurvision programmes to North American screens.

INTERNATIONAL CO-OPERATION

"The point in world history when satellites begin to offer major civil benefits is still a number of years away", Deputy Minister of Transport John R. Baldwin said recently, "but, when it does come, full benefits can only be achieved on a basis of international co-operation". "It is the desire of the Department", he added, "to work towards this international co-operation and to participate on whatever scale our resources permit."

Overseas telephone calls, except those made by radio, are now transmitted by cable, each of which can only carry 60 calls simultaneously. Present cables transmit TV pictures bit by bit until, an hour or so later, a shortened video film has been built up at the end of the line. The reason for the cable's limited capacity is the loss of signal power throughout the transmission and the resultant need for built-in repeaters or signal boosters every 30 miles. A signal sent through space retains much more of its strength. Nevertheless, for strategic and other reasons, cables will probably continue to form an essential element in international telecommunications.

The United States are now building three experimental satellites for Project "Relay". Each will weigh approximately 120 pounds and contain a sun-powered repeater. Two will be orbited, the third will be kept as a spare.

The satellites will circle the earth every 165 minutes and be visible - and useful for telecommunications - to both sides of the Atlantic for only 30 to 35 minutes during each orbit. Their distance from the earth will vary from 900 to 3,000 miles. Computer-equipped ground stations in the U.S., Britain, France and possibly West Germany will track them with disks 85 feet in diameter.

To obtain a full-time operational system, 20 to 40 satellites would have to be orbited, so that when one dipped below the horizon another would replace it.

Canada's team of telecommunications specialists in Project "Relay" will work with Britain's General Post Office, which operates telephone and telegraph lines in the U.K. Some other Commonwealth countries may also be co-operating in a similar fashion.

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FREEDOM EAST AND WEST

(Continued from P. 2)

"Why has Khrushchov's puppet government in East Germany decided to precipitate a crisis at this time by closing the border in derogation of the four-power agreements? This action seems to be one of provocation coupled with the desperation which has arisen from the inability of East Germany to stem the exodus of East Germans.

"The problem of unity of action in the Western world is under constant review. Canada has met its goal in NATO. All the nations should bring their forces up to strength, not by way of threat but to show that the NATO nations are serious and united in their stand.

"NATO has preserved the freedom of the West and NATO forces must have the best and most effective defence weapons available to them. Those who advocate that Canada should withdraw from NATO in the event that nuclear weapons are made available for the possession and control of NATO are advocating a course that would be dangerous to survival of the forces of NATO should war begin, and to freedom itself."