

## SATELLITE TELECOMMUNICATIONS IN ALASKA

*The communications industry in Alaska is largely capital intensive; most economic changes over the next ten years are expected to be technologically induced. Recent developments initiating the long range move to integrate current microwave systems with satellite communications systems are particularly interesting from the standpoint that while advanced telephone service systems will better serve the communications needs of Alaska, inevitable technological changes may exert some downward pressure on long term employment patterns within the telephone service sector of the industry.*

Following an agreement reached between the State of Alaska and RCA Alaska Communications, Inc., on July 11, 1975, the Federal Communications Commission reviewed a joint State/RCA Alascom application requesting immediate authority to construct a satellite earth station system. Permission was granted on July 18, authorizing the joint development of the first 20 of 100 satellite earth stations. A waiver of the FCC's rules regarding the use of smaller than 30 foot antennas was subsequently issued to allow the use of 15 foot antennas for the Alaska stations. The FCC ruling which signaled the go ahead for the State and RCA Alascom to purchase the necessary equipment for the earth stations was paved by the signing of an interim agreement, initially suggested in May, 1975, by Governor Jay S. Hammond. The agreement ended a year long dispute over who should own and operate a network of small earth stations in rural Alaska.

Hailed as a "major step" toward resolving issues in the development of a communications system throughout Alaska, the State/RCA Alascom pact is a temporary solution designed to hasten the purchase and installation of satellite communications facilities at the earliest possible date. Both the State and RCA Alascom have emphasized that the agreement is interim in nature, and was negotiated without prejudicing a final FCC determination of the permanent ownership of the small earth stations. In the interim, ownership will be held in trust by the State and RCA Alascom until the FCC decides which party should own the stations on a permanent basis.

Under the terms of the agreement the State will be responsible for buying the major subsystem

components for the 15 foot earth stations. The 15 foot parabolic reflector antennas will be assembled by the Andrew Corporation of Orland Park, Illinois. Power amplifiers will be supplied by the Hughes Aircraft Co. of Torrance, California, and low noise amplifiers will be supplied by Amplica, Inc., of Westlake Village, California. California Microwave, Inc., of Sunnyvale, California, will furnish the carrier equipment. RCA Alascom will assume the costs of the integration, testing, and on site installation of the equipment. According to the project manager for the State, the earth stations which will supply bush villages with a telephone link and a direct channel for emergency medical communications via satellite are expected to cost between \$50,000 - \$60,000 each. Although Alaska is presently serviced by a Western Union satellite, RCA Globcom plans to launch its own satellite in December, 1975. A second RCA satellite is due to be launched in March, 1976. RCA Alascom will invest about \$24.9 million in the 2 Globcom satellites and will utilize about 30 percent of each satellite.

The joint State/RCA Alascom selection of the 20 villages that will receive satellite communications services evolved from recommendations of the United States Public Health Service, Division of Indian Health, which singled out several locations, based on medical need. The poorest health-related communications in the State are presently in the Kobuk Valley and at those interior villages which do not have ATS-1 satellite outlets or telephone service via microwave. In many of the villages in the Kobuk Valley and the Yukon-Kuskokwim delta region, the public health communications systems rely on the single side band radio. These open network systems not only inhibit discreet communications between the paraprofessional health aides in the villages and the doctors in the regional hospitals, but the single side band transmitters and antennas require frequent repair. Aleutian Island points not served by microwave also have unreliable communications.

Construction of the 20 earth stations is due to begin before the end of 1975. RCA Alascom has estimated that 5-7 of the earth stations could be installed by the end of the year, and State officials have indicated the rest of the 20 stations would probably be in by March.

The construction schedule for the earth stations was drafted with the northernmost sites slated to be constructed first, before the onset of winter. The first earth stations will be installed at Anaktuvuk Pass, Kivalina, Noorvik, Shungnak, Kiana, Ambler, and Noatak. Second priority will go to installation of stations at Gambell and Savoonga on St. Lawrence Island. Tanunak, Tooksook Bay, Mekoryuk, Kipnuk, and Chefornak, in the Yukon-Kuskokwim delta area are in Priority Group 3. Atka, King Cove, and Akutan in the Aleutian chain are fourth in the order of priority. St. Paul and St. George in the Pribilofs are in Priority Group 5. The last of the 20 units will be installed at Tenakee Springs in the Southeastern region.

When the installation of the 20 earth stations is completed, RCA Alascom will apply for FCC operating authority for the facilities, held in trust, until the Federal Communications Commission decides the final owner. As specified in the July agreement, the State will support RCA Alascom's request for interim operating authority. Subject to further agreement between the State and RCA Alascom, the rest of the 100 earth stations planned for rural Alaska are expected to be completed by 1977 or earlier.

The compromise between the State and RCA Alascom is a victory for the people in rural Alaska. With the eventual completion of the entire project, 93 bush communities presently without telephone connections will have a voice link to the rest of the state and the world.

## ALASKA'S LABOR MARKET IN JUNE

**EMPLOYMENT-UNEMPLOYMENT:** Alaska's total unemployment rate jumped from 8.2 percent in May to 8.6 percent in June. With the end of the school year and the influx of students and in-migrants from the lower 48, the civilian labor force bolted to 186,300, up 11,000 from May and up 30,200 from a year ago. Total unemployment in June rose to 16,000 up 1,700 from May and up 200 from June a year ago. Over the month, total employment increased from 160,800 to 169,900. The gain of 21 percent in total employment from the year ago level typifies the impact of the trans-Alaska oil pipeline.

**MINING:** During late June, oil and gas drilling operations continued to wind down. Exploratory activity other than gas and oil spread into the Brooks Range where several mining companies were investigating mineral deposits in the Copper Belt which stretches from the Ambler River to Survey Pass. Mining employment held steady from May to June, but was up 600 from a year ago.

**CONSTRUCTION:** New contract construction awards in June totaled \$122,180,049. Local construction projects gained momentum as the pace of commercial building, highway work, and sewer and waste treatment plant construction was stepped up. Over the month, construction employment increased from 13,200 to 15,300.

**MANUFACTURING:** Alaska's salmon harvest got off to a slow start in June. Through the week ending June 29, the statewide canned salmon pack was down from the corresponding week a year ago for all species except chum - the chum catch was mainly confined to the Alaska Peninsula. Although landings of dungeness crab, scallops, and shrimp were up from May, cumulative shellfish catches through June were also down from a year ago, for all species. The seasonal increase in food processing employment over the month was checked by a drop in the lumber and wood products sector, where logging activity was slowed by a labor dispute in the Southeast. Total manufacturing employment in June rose to 9,800 up 900 from May, but off 200 from last year.

**TRANSPORTATION, COMMUNICATIONS, AND UTILITIES:** During June, sea, rail and air carriers all added new capital equipment to their operations. One major sea cargo line boosted its hauling capacity to Alaska by 33 percent with the acquisition of a new vanship. Industry employment increased by 900 to 15,300 during the month, and was up 2,900 from a year ago.

**TRADE:** In June, employment in eating and drinking places vaulted to 5800, up 700 from May; this month to month increase marked the beginning of summer and the arrival of the tourist season. From May to June, trade employment increased to 23,300, up 1,200 over the month and up 3,300 over last June.