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Author: Mrs. Alice Tommasi
Italy, alice.tommasi@studenti.luiss.it

Ms. Dana Conzato
Italy, danaconzatokeran@gmail.com

THE SIRIO SATELLITE: HOW ITALY CONTRIBUTED TO THE TELECOMMUNICATIONS FIELD

Abstract

This paper analyses how the Sirio satellite program helped fill Italy's technological and organizational gap by considering three levels: technical-technological, political-industrial, and international relations and security. The primary motivation of this analysis is to present fundamental historical legacies, trends, and assumptions in the economic and governmental field to lead concrete answers to current questions. Research is conducted by consulting the archives of the National Aeronautics and Space Administration (NASA) and the European Space Agency (ESA), as well as of Italian newspapers, including "il Messaggero" and "Corriere della Sera". In addition, oral interviews are carried out.

The paper intends to highlight the crumbling underway between the traditional governance of scientific and technological research and the definition of an industrial policy that pivoted on the goal of innovation. Notably, the contracts signed represent a first attempt at subsequent public-private partnerships (PPPs) that will be fully accomplished with Italsat. The adoption of this new approach has helped overcome the specific structural characteristics of Italian Small and Medium Enterprises (SMEs), specializations in traditional sectors, and intensive use of labour - deemed insufficient to bring technological innovation and the inability to produce capital accumulation to initiate investment in research.

Parallel to the organizational issue, Sirio was distinguished by the technological complexity of providing innovative technical features, which is attributable to the need for experimental exploration in higher bands. In addition, it has also enabled the acquisition of considerable operational experience for in-orbit management of synchronous satellites that will later be exploited in other national, European, and intercontinental programs - such as the European Ots (Orbital Test Satellite) to complement the international ECS (European Communication Satellite) program. It is worth remembering that Sirio is credited with being the only satellite built in Europe to emit receivable signals on the continent until the 1989 launch of the European Space Agency's Olympus.

The research seeks to assess Sirio's contributions to organizational and technological gaps by considering the international arena, notably, the critical issue revolving around European autonomy regarding application satellites and access to space. The paper examines the Italian position in the context of bilateral relations with the United States, contributions with Esro and Eldo, relations with the People's Republic of China, and agreements with technologically less advanced states, above all the Arab countries. Furthermore, it outlines how Sirio contributed to the cultural shift toward research, creating a network of national and international political-scientific relationships.