

INDIGENIZATION OF COMMUNICATION SATELLITE IN NIGERIA, THE WAY FORWARD

By

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Industrialization is considered as a **child of necessity** in every nation's economy for it accelerates the process of both Economic growth and Economics of development. The importance of the industrial Sector in the economic development cannot be over-emphasized. Thus, the fortune of every economy lies in its industrial sector which makes it the **HEATBEAT** of economic development.

The Nigerian indigenization policy (1972)

attempts to strengthening Nigeria economy through it aims and objective which include;

- The transfer of ownership and control to Nigerians in respect of those enterprises formally wholly or mainly owned and controlled by foreigners.
- Fostering widespread ownership of enterprises among Nigerian citizens.
- The creation of opportunities for Nigeria indigenous businessmen.

- The encouragement of foreign businessmen and investors to move from the unsophisticated area of economy to the area where large investments are more needed.

The 1972 Act that resulted in the indigenization policy was amended, repealed and replaced by the Nigerian Enterprises promotion Act, in 1977. This Act gave birth to the indigenization policy of 1977.

Satellite technology remains the driving force behind most developed and developing economies. It provides security, telecommunications, technology advancements, protects the environment and a host of daily services. In today's satellite oriented industries change is the only constant, from market and technological changes to policy and budgetary uncertainties. In line with NASRDA'S mandate and to fully indigenized satellite technology in Nigeria, the Centre for Satellite Technology

Development (CSTD) Abuja and the Centre for Satellite Transport and Propulsion Epe were established.

The Centre for Satellite Technology Development (CSTD) is an Activity Centre of the National Space Research and Development Agency (NASRDA). The Agency is a parastatal under the aegis of the Federal Ministry of Science and Technology. It is tasked with the implementation of the National Space Policy and Programme.

CSTD is tasked with the exclusive mandate to be “the primary focus for the development of satellite payloads for various space applications such as Remote sensing, Communication, navigation and so on.

In furtherance of the aforementioned policy objective, the Centre is significantly involved in technology transfer drive of NASRDA through extended training of staff at international satellite development facilities.

Vision Statement

The Centre shall attain continental leadership in satellite technology through the development of indigenous competence and capabilities in satellite subsystems as a tool for national growth, integration and huge contribution to the development of space technology for the benefit of mankind.

Mission statement

The Centre shall achieve satellite technology competence so as to indigenously design, test and fabricate a satellite by 2018. Centre's Mandate.

To keep up with such changes the CSTD has a growing work force of highly motivated staff from various scientific and engineering backgrounds

The indigenization of communication satellite in Nigeria is aimed at increasing the involvement of local scientists and engineers

in the design, building and test of a communication satellite; a technology that was previously championed by engineers and scientists from first world countries.

Collaboration with experts within Nigeria has been identified as a tool through which ideas can be galvanized together to achieve the desired goals. Partners in space related fields can contribute as well as assist each other in identifying areas of needs. Our universities curriculums need to be upgraded to offer

space related courses so that undergraduates who are the future of this country can begin to have a feel of this technology as well as develop interest in space science and technology related courses. Explorations of our indigenous capabilities also need to be done in order to identify some of the local materials that are available and that can be utilized for such high technology ventures. To this end, effort is already in place to collaborate with the energy research center in

sokoto for the development of solar cells that can be utilized for satellite applications.

In order to accelerate the indigenization of satellite in Nigeria, Satellite to Promote Instructional Research Education (SPIRE) project was established by Centre for Satellite Technology Development, (CSTD, Abuja. The project also promotes satellite education and training in Nigerian Universities by engaging each of the participating university to design a specific satellite subsystem.

Migration of some of the existing services on foreign satellites by companies such as DSTV, MTN etc to Nigerian communication satellite series is also key to core competence development for our scientists and engineers who are involved in this service delivery. Apart from knowledge acquisition and competence development by our scientists and engineers, this will lead to increase revenue generation by our local manufacturing industries.

The establishment of Design Center (DC) and Assembly integration and Testing Center (AITC) is very critical to the nation's indigenization programme aimed at building Satellites and other related high technology projects in line with the 25 year Road Map of Space Mission in Nigeria. If these infrastructure is put in place our progress in the Space industry will become irreversible. The Chinese were responsible for the training of over 50 Nigerian Engineers and Scientists, in spacecraft design and building, as well as

training the core of the Iranian Engineers and Scientists that achieved the great feat of building and launching the Iranian Satellite last year. The Iranians were able to achieve this because they had a Satellite Design Center and Satellite Assembly, Integration and Test center in Iran through their collaboration with the China Great Walls Industry Corporations (CGWIC) which is a giant stride in the Iranian indigenization effort.

Developing capacity and capability in the manufacture of spacecraft and Launch vehicle are categorized at par with that of Missile Launch Technology in the Vienna convention. *It therefore has scientific, strategic and political considerations with serious security implications.* Since the DC and AITC are critical issues in the Missile Technology Control Regime (MTCR), China Great Wall Industry Corporation (CGWIC) is willing to deal with Nigeria under confidential and non-disclosure terms so as to avoid sanctions from Missile Technology Control Regime (MTCR). Nigeria has spent huge amount of money in training and developing human resources in

the area of space science and technology. Unfortunately, without a functional Satellite Design Centre, Assembly, Integration and Testing Centre, these trained engineers and scientist will suffer from intellectual and technical malnutrition, stagnation and atrophy. Hence, the need for continuous capacity development aimed at indigenization of communication spacecraft is key for the actualization of the mandate of the space agency.

Nigerian Universities should endeavor to undertake appropriate research in the fields of satellite communications, to engender research interest in this field's. Government would encourage significant research activities in space related and satellite issues by creating a space endowment fund for research.

We can achieve indigenization of communication spacecrafts only when we acquire our own functional AITC/DC facilities within the country where experts within and outside Nigeria can come in and contribute from the wealth of knowledge they

have acquired through the years, collaborate with Nigerian Universities as well as identified private institutions in space related issues, encourage Universities to offer space related courses through the review of the available curriculum, training and retraining of Nigerian engineers and scientists as well as establishing factories and laboratories within Nigeria as was done in the case of China, India Malaysia, and Iran, amongst many.

Identification of our indigenous capabilities and local source of space qualified materials like high grade aluminum and advance

composite materials increased funding of space research and development activities.

Given the huge capital outlay required to indigenize satellite communication in Nigeria, the Federal Government should endeavor to make space development a national priority.

We can learn from Japan in their drive for indigenization. Technology policy has been at the center of Japan's development efforts since the late 19th century. According to key postwar studies of Japan's industrial development, the Japanese government self-consciously selected sectors based on the

perceived potential for economic growth and technological change. In fact, any industry favored for promotion had to be of seminal importance to Japan's technological development and national economic welfare. The focus, in short, was on the acquisition of key industries and technologies that could be crucial for national defense, especially those characterized by high growth and high knowledge intensity, as well as widespread extensiveness of uses and economic benefits.

For Nigeria, the Space Agenda with emphasis on communication satellites should be perceived as potential for economic growth

and technological development. Nigeria needs more than one communication satellite in space at any one time to ensure reliable service delivery. Space programs should not be seen as a white elephant project but should be seen as crucial for national defense, revenue generation and economic development. For Nigeria communication satellite is not an option but a necessity. We should consider communication satellites for broadcasting, and other areas of applications. Nigeria needs more than two communication satellites in space. I strongly believe that sky is not our limits as we have gone beyond the sky.

God bless you.