The applications of GNSS in West Africa begins with the objectives of the *African Geodetic Reference Frame (AFREF)* which is to establish an unifiesd reference frame through the use of Space Geodesy Techniques, GNSS in particular, to tie various national and regional reference networks of Africa. The use of GNSS in West Africa, currently involving mostly the Global Positioning System (GPS) is for any operation that requires determination of accurate positions such as in the Oil/Gas and Solid Mineral Industry (Land and Deep Offshore exploration, prospecting/ production, geohazard survey, pipelines laying/ maintenance, boundary demarcation, transportation, etc), mapping for Socio-economic development, political/administrative boundary demarcation, geodynamics and natural hazard studies, commercial Air and Sea Transportation, the TV and Telecommunication industry, etc.

The effective applications of GNSS listed herein demand unified accurate datum transformation which AFREF seeks to establish for each African nation and entire Africa. This concept requires, as a prerequisite, the knowledge of "Reference Systems and Frames in Geodesy"- ITRF, ICRF, ITRS and Geodetic datum which this paper deals with. In Nigeria, each of the more than 20 Oil Companies uses its own set of transformation parameters, 3 instead of 7 parameters, except Shell Petroleum Development Company (SPDC). The author's determination of 7 Parameters Datum Transformation for SPDC and the accuracy analysis are discussed. These are the fundamentals of the prerequisites for the applications of GNSS and achievement of AFREF objectives.

Nigeria's National Space and Research Development Agency (NASRDA) recently signed a collaboration research agreement with the USA National Aeronautics and Space Administration (NASA) to enhance both the application of GNSS to hazard/geodynamics research and the determination of Earth Orientation Parameters, at its Centre For Geodesy and Geodynamics at Toro in Bauchi State. This will be briefly discussed.