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**THE RIVER NIGER BASIN
AND DATA TELETRANSMISSION**

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01. One of the potential users of a satellite based telecommunication system could be the River Niger Basin Hydrological System which I am describing in a few words.

The eight countries of the River Niger Basin are represented in the River Niger Commission (the 9th, Chad, holding only a portion of it, is not). The RNC decided years ago to set up a hydrological forecasting system for which assistance was sought from international sources. After a preliminary project, the stage was reached in 1978 when a preparatory project could be started with the aim of preparing the Project Document. This was my task. The Project Document has been prepared, and presently is about to be signed. This will signal the starting of the Project.

02. The project will consist of two phases, both of them covering the entire basin of the Niger (the Project Document concerns only the first phase). In the first phase only water levels will be observed and forecasted (propagation model), while in the second, forecasting will start from precipitation data (transformation + propagation model).

03. The basin's length from Guinea to Cameroon exceeds 3 500 km, the Niger's length exceeds 4 000 km. Enormous distances are involved, and establishing an operational forecasting system covering such an area requires unconventionally reliable real-time transfer of data. Around 100 automatic water level gauges are envisaged and a telecommunication system relaying the data to the centre located in Niamey where they will be run on a computer will a mathematical model in order to produce forecasts to be disseminated to the national hydrological services of the member countries.

04. For realizing the transfer of data, 3 alternatives were thought of, final decision resting with the results of a feasibility study to be performed within the project itself.

The are :

- (1) fully automatic surface VHF or UHF system (no human interference at either the gauges or sub-centres),
- (2) meteor-bust,
- (3) satellite-based systems.

05. What has been said at this seminar, either the Meteosat or the Argos system could be made use of and they will be thoroughly investigated within the subsequent studies from that aspect, together with the other possible solutions.

