

Status Report on the DBBC Project

G. Tuccari, W. Alef

The DBBC project has been approved by the EVN Board of Directors in their last meeting in South Africa. This conclusion came after the report of the Critical Design Review meeting held in Bologna in the beginning of May where VLBI experts from Europe analyzed the project. Comments came even from Haystack and LBA in addition, so that a fruitful discussion has been conducted in order to point out possible critical points in the project.

Decision taken by the CBD is related to the main items:

- the EVN CBD supports the current effort of the DBBC Project Team (PT) and has adopted it as an EVN Project;
- the project should continue with its current approach towards the production of a prototype in order to stay on its time-track;
- the project should in parallel consider the introduction of more powerful new generation FPGA hardware (Xilinx Virtex 4) for the production models and should prepare the appropriate redesign of the hardware in order to accommodate these changes;
- the board stacking design should be carefully considered and tested but considering the existing experience with such designs it seems advisable to continue with the current efforts;
- the EVN CBD also recommend the participation of Haystack in this project and ask the PT to identify components, where Haystack participation would be possible. In particular, Haystack can play a role in further defining the geodetic VLBI aspects in the DBBC project;
- the EVN CBD requests that the PT stays on a well-defined timeline for the production of the prototypes because delay will weaken the general applicability of the EVN DBBC final products;
- the EVN CBD requests that the members of the CDR Committee continue to serve as an Technical Advisory Board until the completion of the project.

A complete DBBC prototype is under construction together with two Chinese 'mDBBC' systems, a reduced version of DBBC. All those are planned to be available in the end of summer 2005. A period of testing will be then conducted until the end of this year for verify the firmware configurations and prepare a final report.

The evaluation of the upgrade with the Virtex4 Xilinx devices family started and a new class of boards is under development. This phase could see the first light in the beginning of the next year.

Contacts with Haystack are going to be undertaken in order to promote their collaboration in the configurations of interest for geodetic observations, in alternative to the traditional ones developed or in development for both astronomy and geodesy.