Appendix 1. Illustrative prospects with the VLBI Standard Interface

This appendix is intended to illustrate the expected views of the system configurations which will be seen in the various stages of the VLBI operations with the use of VLBI Standard Interface (VSI).

A1-1. Observations

With the use of the VSI, various types of the data recorders can be used with any formatter/interface which samples the analog data to be recorded on a tape by the data recorders. In this way, an operator at an observation site can choose a data recorder according to the requirements of the VLBI session to be performed.

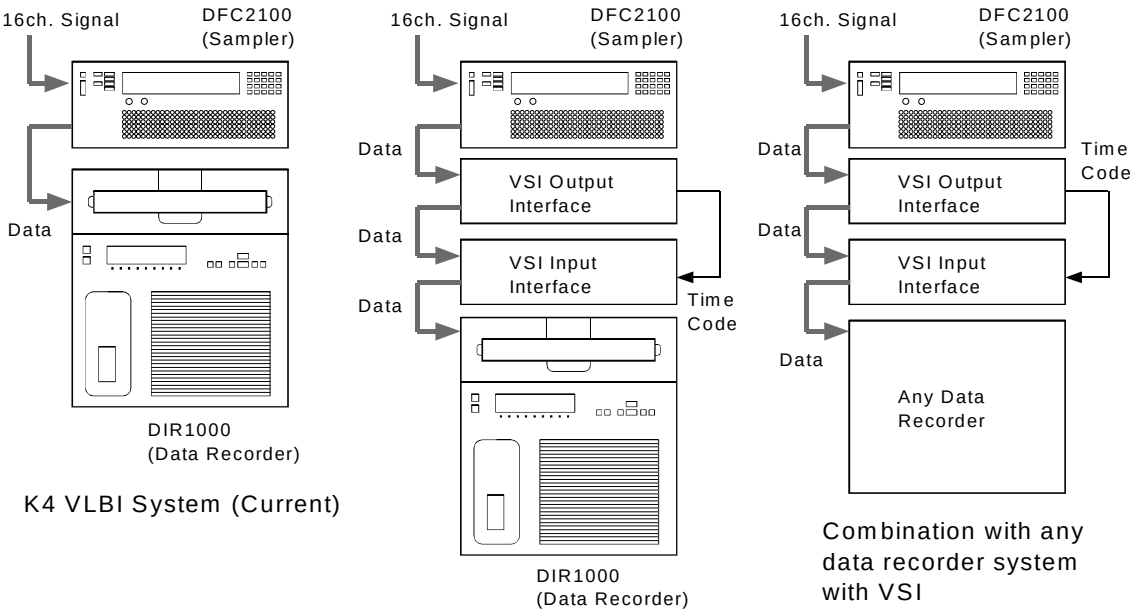

Figure A1. Three different configurations at an observation site expected to become possible with the developments of the VSI.

A1-2. Tape Copy (Dubbing)

With the use of the VSI interfaces, VLBI observation data recorded on any media can be copied to different tape media for dubbing operation as shown in the Figure A2.

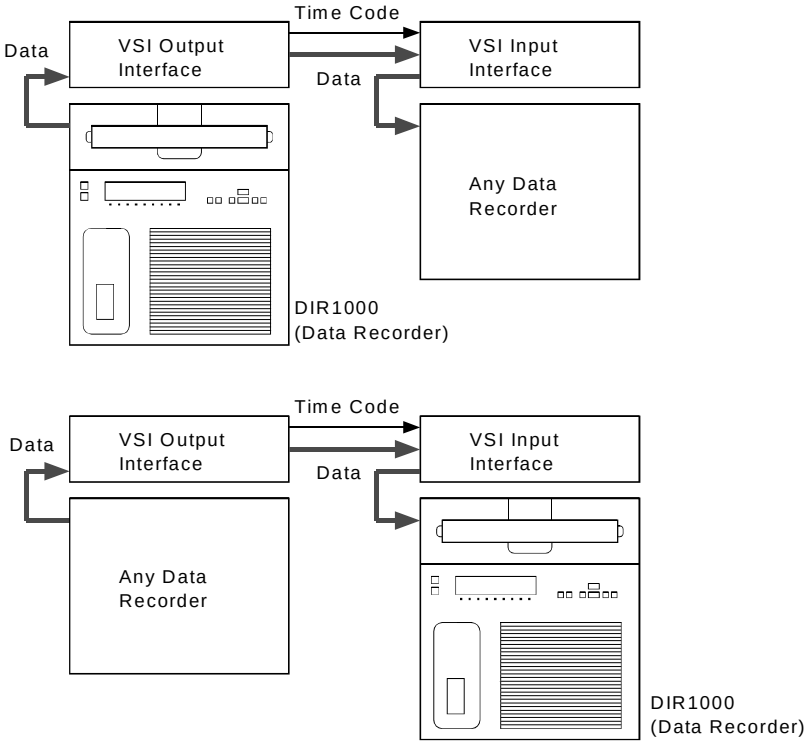

Figure A2. The expected configurations of the system with which observation tapes are copied to the other tapes in a different tape media using the VSI.

A1-3. Correlator

At a correlator station, multiple data recorder systems should become possible to coexist with the use of the Output Interfaces of the VSI. The correlation processing will be started by first setting the time of the wall clock system. After each data output box is commanded to synchronize the data to the time code generated by the wall clock system, the wall clock is commanded to increment. Then each recorder is controlled by the data output box and synchronized to the time code. The correlator system correlate the observation data and the results will be written to output files with the auxiliary data including the flags which indicate whether the data are valid or not. When the data is synchronized to the time code from the wall clock, the flag will indicate the results are valid and vise-versa. In an actual impremention, much more complicated procedures will be necessary to position each tape position and such a detail must be considered in the course of designing the correlator system.

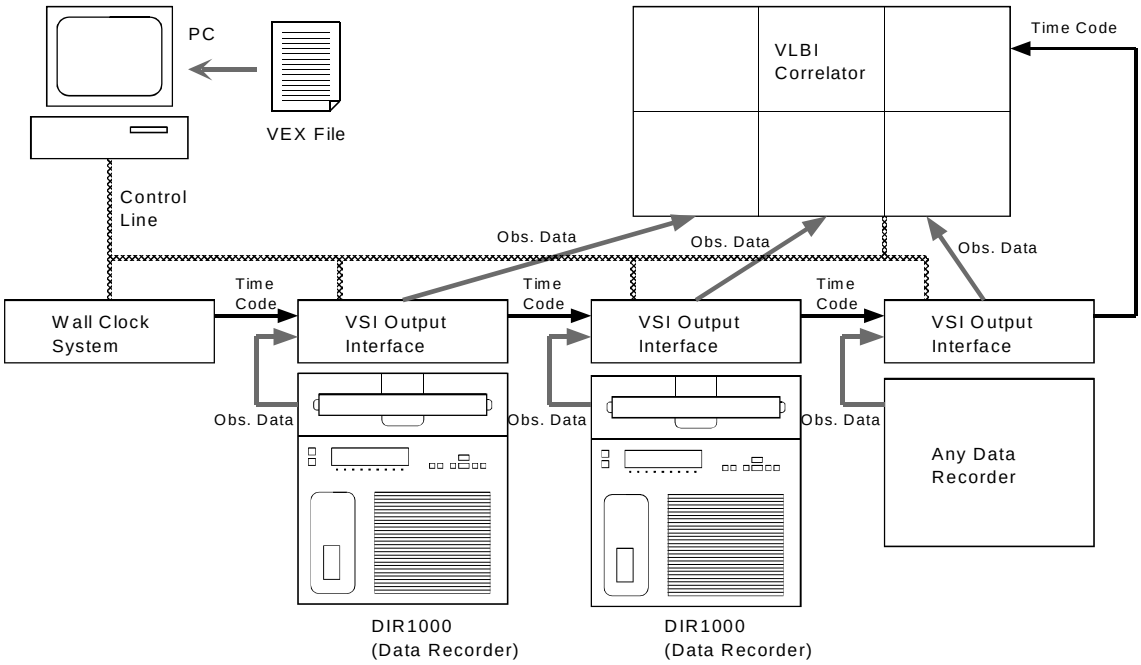

Figure A3. An example of the system configuration for a correlator using VSI.