
APPENDIX H**OUTPUT PORT PROVIDING A TCP/IP DATA STREAM**

1. The existing SADIS receivers were designed approximately five years ago. The important feature of the SADIS receiver compared with other earlier non-ICAO satellite data distribution systems was the open interface whereby both the data format and the electrical and physical interfaces complied with international standards. This allows the user a choice of work station from a large number of suppliers whose various features allow users to choose the work station targeted at their particular application. As the full potential of SADIS has become apparent, it is clear that the separation of products between various ports and discrete permanent virtual circuits associated to those ports is not now the most cost-effective and efficient means of interfacing a SADIS receiver to a user.
2. Partly due to the proliferation of the Internet and the use of local area networks to distribute data between systems and partly due to the parallel development of multi-tasking systems using UNIX software the use of TCP/IP as a communications protocol has proliferated. A SADIS system using TCP/IP would require a single Ethernet co-axial or twisted pair connection on the receiver and a similar low-cost interface card in the workstation. Many PCs come with these as standard at no additional cost. Assuming a satisfactory development programme, the budgetary cost of enhancing a typical single X.25 port SADIS receiver system to the three-port configuration postulated could be at least £2000. With the TCP/IP version there would be no physical changes and the enhanced application could probably be loaded by the user from a CD-ROM.
3. Indications are that the receiver could be modified using a readily available commercial data card. The only costs are likely to be to integrate the TCP/IP communications card into the receiver in place of the existing X.25 card and carry out a testing programme to ensure that all the existing control and security functions are in place. (*The development cost is unknown.*) It would be possible to produce an add-on TCP/IP processor box which could plug into the composite port of a standard receiver thus providing this new level of flexibility at low cost to existing users.

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