	Source Data Collection Design
Description	The organization's system development life cycle methodology should require that adequate mechanisms for the collection and entry of data be specified for each information system development or modification project.
Control Notes	AST is used for assessment of income tax returns of assessees. The process starts with entering the returns received from assessees into the system. Audit found[13] that the returns received were being entered in the system and a return receipt register generated which was not linked to the AST system and was not correlated with the "Blue Book" by updating it. In these nine states Blue Books were not being maintained through the system. The Blue Book which is the main control register of the Income Tax Department for its assessment functions contains details of returns filed, assessments done and demand raised for the last three years. However, this is not being generated/updated in the computerized environment. As a result, lists of non filers, stop filers, jurisdiction change list and list of cases where notices u/s 142(1) are to be sent are also not being generated in these States.
Management Response	AST has the functionality of generating the Blue Book and the form is the same as existed in the manual environment. AST generates all the registers which were in use in the manual environment. It also allows generation of lists such as those of non filers, transfer cases, and cases selected for scrutiny. Monthly Telegraphic Report can also be generated. These can be generated in the AST Module and are linked to PAN.
Assessment	Audit found that although the manual Blue Book and other Registers had been replicated in the AST Module they were not re engineered to take advantage of the information available in the systems environment. The functionalities of the registers which were available were also not in general use leading to controls which had existed in the manual environment being discontinued in the systems environment.

[13] This was seen in the states of Delhi, Maharashtra (Mumbai), West Bengal, Tamil Nadu, Karrnataka, Gujarat, Punjab, Himachal Pradesh and Uttar Pradesh.

Recommendation	9. A control register of the basic source data which has all necessary pieces of information should be designed within the AST System with inputs as necessary from the information available in other modules of ITD Applications, which gives details of filing of returns, assessments, demand creation and payment for the past three years. This could be a re engineered format of the Blue Book so that data relating to demand and collection is also available in this Control Register. Data from the other modules of OLTAS and e-TDS could also be linked to this. 10. It should be ensured that the functionalities of lists and registers available currently are actually being used.

Availability as a Key Design Factor	
Description	The organization's system development life cycle methodology should provide that availability is considered in the design process for new or modified information systems at the earliest possible stage. Availability should be analyzed and, if necessary, increased through maintainability and reliability improvements.

Control Notes	The AST system's back end (data base server) is located in 36 RCCs. The database server used was Oracle, with front end in Developer, in two-tier architecture.[14] The use of two-tier architecture meant that only way of making the system available to the users in remote locations was by having dedicated communication links. DIT Systems stated that implementation of AST required certain prerequisites which were stabilisation of network connectivity and the AIS Module, and training of personnel.[15] A large proportion of users have not been brought onto the system.[16] Problems of connectivity have meant that a large number of users on the WAN could not use the system fully.

Management Response	The system was conceptualised on the technology available in 1993-94 as per the recommendation of the Working group. Bandwidth has been augmented for users in the 60 stations of Phase I and Phase II and the rest of the cities will be connected in Phase III. Simultaneous country wide implementation was not possible.
Assessment	The dependence of AST on network connectivity has affected its implementation as well as use as the system is not fully available to users on a 24/7 basis. All stations are yet to be brought on the network although eight years have passed since its commencement in 1997.
Recommendation	11. Since availability is and remains a crucial factor it is recommended that the Department may consider solutions for this including virtual private networks with the appropriate technology.

[14] The operating system and RDBMS software have multi user licenses. The operating system originally installed was AIX version 4.1, which was upgraded to version 11i. The RDBMS originally provided was upgraded to 7.3.4. The current HP server provided has Oracle 8i. The system is being migrated to 9i and quasi 3 tier architecture as part of Phase III of comprehensive computerisation plan.

[15] AIS and Training have been separately discussed in "Identify Automated Solutions" and "Educate and Train Users" respectively.

[16] AST was installed for initial Acceptance on 15.11.1996 and approved on 22.7.1997. Only 2571 Assessing officers were using AST at 60 stations against the total number of 4436 Assessing officers till 31.3.2005. Partial implementation was found in Delhi, Andhra Pradesh, Uttar Pradesh, Jharkhand, Gujarat, Maharashtra, West Bengal, Tamil Nadu.

	IT Integrity Provisions in Application Program Software
Description	The organization should establish procedures to assure, where applicable, that application programmers contain provisions which routinely verify the tasks performed by the software to help assure data integrity, and which provide in the restoration of the integrity through rollback or other means.
Control Notes	The AST software is required to work in conjunction with other ITD applications. Implementation of PAN database was a pre-requisite for the processing integrity of AST. Similarly the processing integrity of AST requires that its interfaces with TDS, OLTAS, and IRLA etc. are properly defined and are working. However, it was observed in audit that links of AST with a key system, OLTAS, were not working adequately leading to as much as Rs. 1526.18 crores lying in suspense at only one station namely Delhi.[17] TDS credits are also not being received from the e-TDS module. Correct data relating to the demand outstanding or refund due is also not uploaded from AST to IRLA.[18]
Management Response	The ITD Application is an integrated one with inbuilt linkages between appropriate modules. In the initial stages of implementation of OLTAS, PAN was not properly quoted by assessees and so the tax credits could not be posted to the IRLA of the concerned assessee. These are stabilization issues and are not connected with the working of the linkages. The reconciliation between tax collected by banks and the amount transferred to government account is a separate process being appropriately monitored and there is no suspense amount in this regard. Suspense is of the amount which has been received and remains un-posted to IRLA. There is no deficiency in the AIS-AST interface.

[17] Pl see section on Information Architecture with special reference to FN 8.

[18]It has been observed at all the 12 selected stations that Assessing officers are using only the functionalities relating to processing and rectification. All the other functionalities of AST i.e. scrutiny, reassessment, appeal, revision penalty, waiver, settlement commission, prosecution, audit objections were not used. As a result issues of orders/notices/demands relating to these were not being generated through AST. Therefore, IRLA is not being accurately being updated through AST.
The functioning of other modules of software in ITD i.e. AIS, OLTAS, e-TDS and IRLA, have to be reviewed for smooth functioning of AST.

Assessment	The AIS Module is the pivot on which the system of linkages works. Due to various inherent and operational problems[19] AIS has not been able to perform efficiently thus affecting the processing integrity of AST. In the absence of the linkage with OLTAS and e-TDS working properly there was no assurance that tax paid as per orders passed by the assessing officers was actually received by the government. This lack of integrity in the system means that the income tax department cannot validate that tax collected has been credited to the correct assessee. The snapshot of the assessee's demand and collection position to be provided by the IRLA Module is therefore not accurate. Audit found that AIS was the main index key for the working of the ITD Applications.[20] As a result of this, AST cannot work the way it was conceptualized as the necessary inputs from the other modules are not available. As inputs from OLTAS and e-TDS do not reach AST through IRLA affecting the processing integrity of the system, various manual interventions for entering the correct advance tax, self assessment tax, TDS and surcharge paid by assessees are being done.[21] Further, errors in the AIS data are reflected in the AST module as for example in the case of wrong addresses of assessees generated in AST due to inaccuracies in AIS.
Recommendation	**12.** A review of the use of AIS as a link should be carried out so that the integrity of the AST system can be established and maintained.

[19] Please see AR 12 of 2000 of the C& AG ;Para 3.2.10.2 (b)(i) and (ii).

[20] Pl see the section on Identify Automated Solutions.

[21] Pl see Control Notes of section on Output Review and Error Handling (with special reference to Foot Notes 24 and 27) and also Appendix A Table 4 for number of manual interventions into the system.