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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

GUIDANCE NOTE

# Guidance on Tax Compliance for Business and Accounting Software

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**Approved by**

Committee on Fiscal Affairs
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CTPA

CENTRE FOR TAX POLICY AND ADMINISTRATION

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# ABOUT THIS DOCUMENT

## Purpose

The purpose of this guidance note is to provide a set of standards to be applied to the development of tax accounting software as a means of minimising compliance costs for business and administration costs for revenue authorities.

## Background

This guidance paper forms part of the wider work by the OECD to transform the 1998 Ottawa Taxation Framework Conditions into practical administrative measures. The adoption by software developers of standards for their products that facilitate the creation and maintenance of reliable and verifiable records that can be trusted to contain a full and accurate representation of entries makes an important contribution towards the implementation of these conditions.

This paper has been produced in co-operation with representatives from government, the accountancy and audit professions, and software developers and builds on previous work of OECD Working Parties and Technical Advisory Groups, which may be found on the OECD website http://www.oecd.org. Additional papers to support the standards proposed in this guidance note will be published as needed.

## Caveat

Each revenue authority faces a varied environment within which they administer their taxation system. Jurisdictions differ in respect of their policy and legislative environment and their administrative practices and culture. As such, a standard approach to tax administration may be neither practical nor desirable in a particular instance.

The documents forming the OECD tax guidance series need to be interpreted with this in mind. Care should always be taken when considering a country's practices to fully appreciate the complex factors that have shaped a particular approach.

## Inquiries and further information

Inquiries concerning any matters raised in this guidance note should be directed to Richard Highfield (Head, CTPA Tax Administration and Consumption Taxes Division), phone +33 (0)1 4524 9463 or e-mail (Richard.Highfield@oecd.org).

# SUMMARY

This note describes in general terms the standards that should be applied in the development of tax accounting software. It covers tax reporting and filing standards and focuses on means of ensuring tax audit processes can be carried out with greater reliability and in such a way that costs to both revenue authorities and business can be minimized. It also provides some guidance on how the principles may be implemented in practice.

The note concludes with specific guidance aimed at revenue authorities and software developers to support the standards.

Software developers are encouraged to ensure that:

- software packages provide an electronic export facility for the information necessary to prepare tax returns;

- application software features comprehensive documentation to assist auditors and users in their understanding of the system, the processing, and its environment (see Annex 1, Systems Documentation);

- application software incorporates adequate internal controls to ensure reliability of entry processing (see Annex 2, Internal Controls);

- application software creates adequate audit trails to assist auditors gain audit assurance (see Annex 3, Audit Trails);

- control records held electronically should be validated by appropriate software technologies (see Annex 4, Reliable Records);

- testing programmes using computer audit techniques should be applied when records are held electronically. Revenue authorities should consider collaboration on future work and research in order to come up with a suggested set of substantive tests, both for direct and indirect tax purposes (see Annex 5, Compliance and Substantive Testing);

- software allows auditors ready access to data to perform compliance and substantive testing (see Annex 6, Standard Audit File – Tax);

- archive procedures ensure the integrity and readability of electronic records after an extended period, and allow auditors to retrieve records as required (see Annex 7, Archival Functions).

Revenue authorities are encouraged to:

- begin with an implementation plan, which may include bilateral or multilateral co-operation with other revenue authorities;

- consider carrying out any certification process in collaboration with the member countries;

- work with business system developers and accounting organisations to incorporate this Guidance, including the Standard Audit File-Tax, into their accounting software packages;

- incorporate this guidance into their evaluation processes of business accounting software;

- work with business system developers to incorporate into their software the facility to file tax returns electronically;
- use the SAF-T approach in their audit and verification process;
- work with relevant government regulatory agencies, business associations and other organisations, such as developers of accounting software and private auditors, to promulgate this Guidance and SAF-T, including consideration of an appropriate regulatory framework;
- work with relevant government regulatory agencies, business associations and other organizations such as Standards Bodies to determine the extent to which international standards might be appropriate;
- collaborate on future work and research in order to come up with a suggested set of substantive tests, both for direct and indirect tax purposes.

# INTRODUCTION

1. Historically, revenue authorities have had access to business tax and accounting records in order to be assured that business tax obligations have been met. Globalisation of the world economy has created a new environment in which multi-national businesses find themselves liable to a variety of accounting requirements around the world. Similarly, tax administrations see increased need for international co-operation through exchange of information and, where appropriate, multi-national audit.

2. The development of global standards for the processing and recording of data that form part of a tax declaration is one way to reduce compliance costs by improving assurance mechanisms. While the primary aim of this paper is to increase levels of audit assurance for tax authorities by encouraging them to work with developers of business software in adopting these standards in the design of their products, it recognises that such measures should also reduce administrative costs for these authorities and compliance burdens for businesses.

# 1 SCOPE

3. The guidance in this paper is equally applicable to direct taxes (income taxes) that make use of aggregated entry information as a source for tax returns, and indirect taxes (GST/VAT) that are based on transactions. It covers the application software used to produce the full range of business and accounting records commonly held by taxpayers. It is aimed at software developers across the entire business spectrum of applications used by Multi-National Enterprises (MNEs) to standard packages used by Small to Medium Enterprises (SMEs). Although the content of the guidance note is largely written from a taxation perspective, its requirements are in line with existing best practice for business applications.

4. The guidance has been produced in accordance with the following principles as they apply to software products:

   - Integration of effective tax protection controls into computerised accounting systems.

   - Production of satisfactory audit trails to prove revenue values by recording progress of individual entries from inception to final recording in the accounts (and reverse), together with amendments to standing data held in master files. For each entry the trail may also record a number of links to other associated processes.

   - Audit automation in the form of built-in exception reports that allow users to check the accuracy of processing.

   - Production of a standard audit file that will allow non-specialists to extract and download relevant audit data.

   - Software should allow users to file tax returns electronically.

   - Archive procedures should ensure the integrity and readability of electronic records after an extended period.

   - Provision of comprehensive documentation for users of software products.

5. Incorporating design features into business software that meet these principles will be of great value to businesses attempting to attain satisfactory levels of tax compliance. The accurate processing and recording of accounting data will also be enhanced, thus enabling businesses to control activities, safeguard assets, and monitor profitability. Both public and private sector auditors will also benefit in their subsequent verification of the tax declarations made by business.

# 2 ISSUES

## Costs of Compliance and Administration

6. Governments, through their tax administrations, generally seek to minimise their own tax system operating costs while at the same time keep compliance costs for taxpayers as low as possible.  In order to achieve this, a balance must be struck between the costs borne by business in complying with tax regulations and the costs borne by the revenue authority in running the system.

7. Enforcing compliance via frequent checks, substantive audits and prosecutions is an expensive way of ensuring adequate compliance levels, so most revenue authorities attempt to maximise 'voluntary compliance' where the taxpayer is encouraged to co-operate and actively comply with the tax regulations.  This reduces the cost of administering the tax system but is only practicable when the requirements of the tax system are well understood, relatively easy to comply with, and generally accepted by businesses.  Voluntary compliance is best enabled where tax requirements integrate with existing business records and accounting systems whose main purpose is not recording and accounting for tax.  Providing such systems are reliable, the costs of compliance for both businesses and revenue authorities are likely to be minimised.

8. Large businesses are better positioned to adopt a voluntary approach by the robustness of their internal control systems and procedures, and the activities of internal and external auditors acting on behalf of stakeholders. Small to medium sized enterprises (SMEs), however, sometimes have both relatively significant compliance costs and difficulties in understanding and complying with tax requirements.  Their ability to create, record and maintain reliable records[1] and make them available for audit by tax and regulatory agencies as an integral part of their normal operations may be somewhat limited, and the development of accounting software packages aimed at SMEs forms an important step towards reducing their costs.

9. It is acknowledged that while general principles may be suitable for the vast majority of systems, more detailed requirements will not be appropriate in all cases depending on the size of a business and the complexity of its operation.

## Tax reporting and filing

10. Although accounting systems are used to produce basic information for tax reporting purposes their main use is to provide management with reliable information on which to base decisions in order to ensure that a business operates in an effective and cost-efficient manner.  These management

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[1] A reliable   record is one whose contents can be trusted as a full and accurate representation of the transaction. In order to achieve the appropriate level of trust, the record should also display sufficient levels of authenticity, integrity, and usability . See ISO 15489 Information and documentation – Records management. Part 1 General.

information needs are generally fairly consistent across an organisation, even when it spans multiple jurisdictions. Global standards would help minimize information costs while maximising reporting comparability.

11. The basic information for tax returns usually derives from business applications such as accounting systems. These systems produce both the periodic returns for VAT/GST filing and the annual financial statements that often form the basis[2] for the reported profit in the income tax return.

12. Business accounting software can also produce the information used for filing tax returns. An electronic means of filing and declaring tax due is a desirable feature of software packages and is a legal requirement in some countries. The electronic provision of these items as Business to Government (B2G) and Government to Business (G2B) communications offers efficiency gains to both taxpayers and Revenue Authorities.

Developers are encouraged to provide an electronic export facility for the information necessary to prepare tax returns within their software accounting packages.

## Tax auditing

13. Tax is one aspect of an overall audit; the paper recognises this and attempts to set tax auditing within the overall context. Modern computerised accounting systems present a particular challenge to tax auditors in that key features that were once paper-based can become wholly electronic. Nevertheless, the basic objective of a tax audit remains the same in that an auditor needs to obtain sufficient audit evidence as part of the assurance process in order to be able to draw reasonable conclusions on which to base an audit opinion as to whether or not tax returns are prepared in accordance with domestic legislation. The methodology adopted is largely determined by the audit policies of each tax authority in accordance with domestic legislation, but there are certain generic considerations for each audit.

14. Auditors are now faced with an increasing verification challenge whereby advances in technology and a growing number of legacy operating systems, data formats, backup and file retention options make their task increasingly complex. The ability of users and auditors to operate and understand software depends considerably on the completeness, accuracy and accessibility of documentation regardless of the delivery method.

Developers are encouraged to ensure that application software feature comprehensive documentation to assist auditors and users in their understanding of the system, the processing, and its environment. See Annex 1, Systems Documentation.

15. The examination of internal control procedures forms a substantial part of audit programmes. A review of these controls provides assurance that assets are safeguarded and that entries are properly authorised and completely and correctly recorded in the accounting records. In businesses where there may be an insufficient segregation of duties, evidence of their application may be obtained only by use of substantive testing.

16. Although an electronic environment may change the way internal controls operate, the basic principles of each control type still apply. In a wholly electronic system the established practice of testing the operation of internal controls by

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2 Depending on the Income tax system of an individual country the reported profit may be transformed into a taxable profit.

scrutiny of paper documents containing entry and control information is no longer viable, particularly where no such documents exist. The proof of these internal control processes having been applied may also be held electronically, and these control records will also require some form of mechanism to validate their authenticity and reliability over a period of time. Thus, the reliability of electronic records is a desired outcome of internal controls.

Developers are encouraged to ensure that application software incorporates adequate internal controls to ensure reliability of entry processing. See Annex 2, Internal Controls.

17. There is an underlying need for the accounting system under scrutiny to provide the auditor with an adequate audit trail for a reasonable level of audit assurance. In essence, information on a tax return should be both traceable and capable of reconciliation back to accounting and business records. The source of this audit information is largely (although not exclusively) based on entries and records of changes to system parameters such as master files. The trail may also record for each entry a number of links to other associated processes and events such as receipts, payments, stock inventories, and even front-end systems, all of which may have their own audit trails. Audits that involve specialised trade sectors may also require non-invoice information. Tax auditors for GST/VAT will need evidence of the tax rate charged on supplies of goods and services over a period of time, together with any amendments. The audit trail should also document the operation of internal controls together with the outcomes.

Developers are encouraged to ensure that application software creates adequate audit trails to assist auditors gain audit assurance. See Annex 3, Audit Trails.

18. The practicalities of electronic records found in computerised accounting systems means that audit trails, while complete, will be invisible at certain points to the tax auditor and this places considerable importance on the reliability of these records. The application of security technologies to both the system and the records held therein is a key requirement if reliable records are to be kept and maintained to a satisfactory standard

Developers are encouraged to ensure that control records held electronically should be validated by appropriate software technologies. See Annex 4, Reliable Records.

19. Audit evidence can be obtained from either information found in accounting records and source documents or from the results of an appropriate mix of compliance and substantive testing of data using computer assisted audit techniques; or from any combination of these. These techniques also offer increased efficiency in audit coverage and productivity. In the case of electronic commerce systems audit trails may be wholly electronic and contain large volumes of complex data that may be more easily altered or destroyed than their paper equivalents, leaving no record of such actions. In paper-based systems for conventional commerce documents from an external source are usually regarded as possessing an inherently higher degree of credibility than internal documents, even before internal controls are applied during entry processing. In e-commerce systems the credibility of any external electronic document used as audit evidence will depend less on its origins and form and more on the nature, source and reliability of internal controls applied during processing plus any additional measures applied to ensure its integrity. In the absence of internal controls and additional measures, an auditor should regard any external electronic record produced as audit evidence as being of little more value than an internal electronic record. Auditors may therefore need to test system controls in order to validate audit evidence, including confirmation of entry details with third parties, in order to form an opinion of the reliability of the records.

20. Such testing could be performed using audit facilities built into the software or externally using proprietary audit programs. Types of transaction-based tests that may be applied to data for both direct and indirect tax audits are shown in Annex 5 Compliance and Substantive Testing.

   Developers are encouraged to ensure that testing programmes using computer audit techniques should be applied when records are held electronically. Revenue authorities should consider collaboration on future work and research in order to come up with a suggested set of substantive tests, both for direct and indirect tax purposes. See Annex 5, Compliance and Substantive Testing.

21. Incorporation of the Standard Audit File –Tax (SAF-T) into software as an export facility as described in Annex 6 and the companion paper "Guidance for Standard Audit File - Tax" would provide a ready source of data for these tests.

   Developers are encouraged to ensure that software allows auditors ready access to data to perform compliance and substantive testing. See Annex 6, Standard Audit File – Tax.

22. The data used for testing may be from either current or previous accounting periods according to the compliance requirements of individual jurisdictions. In the case of earlier periods, tax auditors may need to be able to access data from an archive. A prime concern for an auditor when reading an archived record is assurance that it is capable of being verified as an original, i.e. the record under scrutiny is identical to the one on which the original accounting entry was based. Thus, it is important that the SAF-T is capable of being recreated on demand.

   Developers are encouraged to ensure that archive procedures ensure the integrity and readability of electronic records after an extended period, and allow auditors to retrieve records as required. See Annex 7, Archival Functions.

## Corporate Governance

23. This Guidance is published at a time when corporate governance is under scrutiny as never before, as Governments worldwide demonstrate a firm resolve to increase corporate responsibility and accountability through legislation such as the Sarbanes-Oxley Act 2002 in the US, and the EU ruling that all listed companies in Europe must adopt the International Financial Reporting Standard by 2005 at the latest. This guidance note does not deal with Corporate Governance issues specifically, but its key principles, especially in the establishment of internal controls and access to entry data for compliance and substantive testing of these controls will be a useful tool in enabling businesses to meet the essential requirements of this type of legislation.

# 3 OPTIONS FOR IMPLEMENTATION

24. The implementation of this guidance at a national level is the responsibility of individual revenue authorities. There are a number of options to achieve implementation: by legislation; in conjunction with a national Standards Body; by a voluntary agreement with business stakeholders, etc. As implementation will need to reflect national cultures and approaches that might involve considerable consultation with a variety of stakeholders revenue authorities are encouraged to begin with an implementation plan, which may also include bilateral or multilateral co-operation with other revenue authorities.

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25. One outcome of implementation could be the creation of certification schemes for software that meets this Guidance. Such an approach would help reduce the differing requirements faced by businesses operating in multiple jurisdictions. It would also enable software developers to work to a standardised implementation that could be adapted to individual country requirements.

Revenue authorities are encouraged to consider carrying out any certification process in collaboration with the member countries.

26. In order to encourage take-up of the guidance by developers and others it would be helpful for revenue authorities to work together with software developers and, where considered appropriate, accounting organisations, to incorporate the guidance into their accounting software packages.

Revenue authorities are encouraged to work with business system developers and accounting organisations to incorporate this Guidance, including the Standard Audit File-Tax, into their accounting software packages.

27. As part of a collaborative approach between software developers and revenue authorities the latter may test and evaluate business accounting software that is or will be used by large numbers of enterprises. In those countries where this is established practice it would clearly be helpful for this guidance to act as one of the criteria against which such software is tested.

Revenue authorities are encouraged to incorporate this guidance into their evaluation processes of business accounting software.

28. Revenue administrations increasingly look to taxpayers to submit returns electronically. This leads to cost reductions for tax administrations through, inter alia, the elimination of double-keying. In these circumstances it makes sense for software developers to build an electronic export facility for the information necessary to prepare tax returns. Therefore, in order that taxpayers can more easily submit returns electronically, a consistent approach will be to the advantage of all. In order to achieve this, revenue administrations should work closely with software developers.

Revenue authorities are encouraged to work with business system developers to incorporate into their software the facility to file tax returns electronically.

29. Taxpayers may also have obligations towards other government agencies, such as trade departments or statistical agencies. In developing software that will support both tax accounting and the requirements of other such agencies it will be helpful if revenue authorities work in co-operation with colleagues from these agencies. Similarly, other business associations and accountancy bodies may also have an interest in ensuring that there is consistency across systems. Revenue authorities are encouraged to work with other regulatory agencies, business associations and accountancy bodies to promote the SAF-T as a means of exporting accounting information.

30. By using business and accounting data retained in a standard audit file for audit and verification, revenue authorities will make savings in audit resources and there will be reduced compliance burdens on business.

Revenue authorities are encouraged to use the SAF-T approach in their audit and verification process.

31. At present it is the responsibility of national tax administrations to implement this guidance in line with their own domestic circumstances. However, there is a danger that in so doing the wider global perspective might be lost. Increasingly businesses are operating across national boundaries and consistency in reporting standards will help businesses meet their international tax compliance obligations. As the guidance is implemented the question of international compatibility is likely to grow and the implications for international co-operation on this guidance will become more important. Therefore more research will probably be required in order to establish the extent to which such international co-operation can be taken. For the time being, however, revenue authorities should, in discussions with developers at the national level, bear in mind future international compatibility requirements.

Revenue authorities are encouraged to work with relevant government regulatory agencies, business associations and other organisations, such as developers of accounting software and private auditors, to promulgate this Guidance and SAF-T, including consideration of an appropriate regulatory framework.

Revenue authorities are encouraged to work with relevant government regulatory agencies, business associations and other organisations such as Standards Bodies to determine the extent to which international standards might be appropriate.

32. Development of a substantive test programme for both direct and indirect taxes by the application of proprietary audit software will help to improve audit and verification. Implementation of these tests offers substantial advances in the efficiency and effectiveness of audit, with consequential reductions in burdens for taxpayers and administrative costs for tax authorities. This Guidance will link to the SAF-T paper, and the development of these tests may also in turn lead to a refinement of the current SAF-T specification or even begin development of additional SAFs.

Revenue authorities are encouraged to collaborate on future work and research in order to come up with a suggested set of substantive tests, both for direct and indirect tax purposes.

33. In the particular case of SAF-T it is recognised that not all accounting systems will have a commercial need to input all the fields in the specification. Indeed these may not be available on the source documentation either sent or received by a business, particularly for SMEs, and therefore SAF-T would only feature those data elements ordinarily available on each system.

# 4 SUMMARY OF GUIDANCE & IMPLEMENTATION TASKS

This Guidance is summarised in the order of the main body of text (not necessarily in order of importance).

**Developers** are encouraged to ensure that:

– software packages provide an electronic export facility for the information necessary to prepare tax returns;

– application software features comprehensive documentation to assist auditors and users in their understanding of the system, the processing, and its environment (see Annex 1, Systems Documentation);

– application software incorporates adequate internal controls to ensure reliability of entry processing (see Annex 2, Internal Controls);

– application software creates adequate audit trails to assist auditors gain audit assurance (see Annex 3, Audit Trails);

– control records held electronically should be validated by appropriate software technologies (see Annex 4, Reliable Records);

– testing programmes using computer audit techniques should be applied when records are held electronically. Revenue authorities should consider collaboration on future work and research in order to come up with a suggested set of substantive tests, both for direct and indirect tax purposes (see Annex 5, Compliance and Substantive Testing);

– software allows auditors ready access to data to perform compliance and substantive testing (see Annex 6, Standard Audit File – Tax);

– archive procedures ensure the integrity and readability of electronic records after an extended period, and allow auditors to retrieve records as required (see Annex 7, Archival Functions).

**Revenue authorities** are encouraged to:

– begin with an implementation plan, which may include bilateral or multilateral co-operation with other revenue authorities;

– consider carrying out any certification process in collaboration with the member countries;

– work with business system developers and accounting organisations to incorporate this Guidance, including the Standard Audit File-Tax, into their accounting software packages;

– incorporate this guidance into their evaluation processes of business accounting software;

– work with business system developers to incorporate into their software the facility to file tax returns electronically;

– use the SAF-T approach in their audit and verification process;

– work with relevant government regulatory agencies, business associations and other organisations, such as developers of accounting software and private auditors, to

promulgate this Guidance and SAF-T, including consideration of an appropriate regulatory framework;

– work with relevant government regulatory agencies, business associations and other organizations such as Standards Bodies to determine the extent to which international standards might be appropriate;

– collaborate on future work and research in order to come up with a suggested set of substantive tests, both for direct and indirect tax purposes.

# COMPATIBILITY

The principles in this document are compatible with those contained in:

- **Electronic Commerce: Taxation Framework Conditions**

  OECD October 1998

  http://www.oecd.org/dataoecd/46/3/1923256.pdf

- **GAP001 Principles of Good Tax Administration**

  Centre for Tax Policy and Administration, OECD May 2001

  http://www.oecd.org/dataoecd/34/39/1907918.pdf

  – **Centre for Tax Policy and Administration Tax Administration Guidance Series**

  – **Business Identification Guidance**

  – **Transaction Information Guidance**

  – **Record Keeping Guidance**

  – **Electronic Payment Systems – Accountability – Guidance**

  – **Guidance for Standard Audit File - Tax**

  http://www.oecd.org/dataoecd/4/56/14990201.pdf

  **OECD Tax Guidance series**

- Transaction Information Guidance

- Record Keeping Guidance

  These papers, produced by the FTA Sub-group on Electronic Commerce and the CID TAG, set the path for this Guidance, and may be found at **http://www.oecd.org/dataoecd/4/56/14990201.pdf**

  **OECD Consumption Tax Guidance Series**

  http://www.oecd.org/dataoecd/25/31/17851117.pdf

  **IT Control Objectives for Sarbanes-Oxley**

  http://www.itgi.org/template_ITGI.cfm?template=/ContentManagement/ContentDisplay.cfm&ContentID=14133

  This document covers Internal Controls for Sarbanes-Oxley as well as providing a list of IT Control Objectives for Program Development and Program Change, Computer Operations and Access to Programs and Data, and Application Controls for the Business Cycles

# ANNEX 1 – SYSTEMS DOCUMENTATION

Proper documentation is an important feature of computerized accounting software, particularly as it helps to save support time and associated costs for users while increasing their confidence through use of the system. Self-training facilities should also be included in the documentation.

An auditor needs to have a clear understanding of the accounting and internal control systems in place before performing compliance and substantive tests, and therefore needs in turn access to relevant systems documentation. The ability of users and auditors to operate and understand software depends considerably on the completeness, accuracy and accessibility of documentation regardless of the delivery method.

The most common types of documentation are:

**Printed manuals**

These are gradually being replaced by electronic versions but remain the preferred method for many users. A disadvantage is the time and cost of producing and making amendments.  Manuals should be in the language and character set of the country in which the product is being sold.

**System-based help files**

This offers significant advantages over the printed text, not least of which is the ability to navigate across the whole documentation to find the desired topic using hyperlink technologies.

**On-line help**

This method offers the most flexibility of use, usually to supplement system help files. Updates are also much easier, particularly if amendments are available for download from the website.

# ANNEX 2 - INTERNAL CONTROLS

It is a fundamental objective for a properly run business that there should not be any unrecorded assets, liabilities, entries or events, or undisclosed items in its accounting systems. Internal controls are the policies, procedures, practices and organisational structures put into place by a business to provide a reasonable level of assurance that business objectives will be met, and in order to reduce risk.

Internal controls should be developed to perform preventative, restorative and corrective functions, i.e. when combined to prevent errors or to otherwise detect and reverse an error that has been processed through to the accounts in order to ensure the integrity of records. The use of electronic records means that proof of these internal control processes having occurred may be held electronically. These control records will also require some form of mechanism to validate their authenticity and reliability over a period of time. The very nature of an electronic environment changes the way of undertaking tests of internal control procedures, yet regardless of their form internal controls and their associated documentation must be adequate to provide reasonable assurance that assets are safeguarded and that entries are properly authorised and correctly recorded in the accounting records.

General controls (sometimes referred to as environmental controls) provide support for the specific controls and therefore provide management with assurance relating to more than one aspect of the accounting information system. Control procedures include:

- Accounting Controls – concerned with accounting processes.

- Operational Controls – concerned with daily operation of the system to ensure it meets business objectives.

- Administrative Controls - concerned with operational efficiencies in functional areas. These also support those operational controls that are specific to operating efficiency, and that provide management with assurance over a specific aspect of the accounting information system

There are further sub-headings for the classification of internal controls in computerised accounting systems, and these are of particular interest to the tax auditor as they are largely relevant to the integrity of a tax declaration:

- System access - Access controls to ensure that only authorized users can access and process data according to the permissions given

- Data capture - Input and output controls to ensure accuracy and security of data created, received and transmitted; also that data is only processed once.

- Data processing - Processing controls to protect and ensure the integrity of the information, and that it remains correct throughout processing.

- Output controls - Controls to ensure that system output is in the correct format, and that the recipient takes any necessary action.

- Data security Controls - Controls to prevent the editing and deleting of entries originally recorded. Changes to recorded entries should be made by journal entry and be adequately documented with information such as:

  - Person making modifications

  - Date of change

- o Previous entry details

- o Current entry details

- Back-up procedures - Back-up controls to guarantee retention of back-up copies of electronic records, computer programs, system documentation and recovery of electronic records in case of system failure.

- Standing data controls - Controls to ensure that criteria used to process data are correct

Internal controls are largely generic irrespective of the business type, e.g. the need to control completeness of processing is a requirement for all systems. Systems that feature specialised electronic front ends such as e-commerce and EPOS effectively require similar controls to off-line systems, although an emerging risk is to be found in the trend for integration of systems between trading parties where each may rely on the activities of each other in assessing overall risk.

The majority of businesses worldwide are classified as SMEs[3], and issues of internal controls and the reliability and authenticity of supporting documentation are particularly pertinent in these cases. Many internal controls that are routinely applied by large businesses may not be practical or cost-effective for SMEs. SMEs often display a particular weakness in that separation of duties is ineffective or non-existent, which can compromise their overall internal control procedures and may also make it difficult for an auditor to detect unrecorded amendment and deletion of records. In these cases sufficient levels of reliability and authenticity are best achieved by the application of appropriate technologies to the electronic record, including the development of software with specific design features that maintain the integrity of accounting records and record their alteration if necessary.

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3 It should be noted that the criteria to classify an enterprise as a small or medium sized business differs from jurisdiction to jurisdiction.

# ANNEX 3 – AUDIT TRAILS

**Introduction**

In the context of this Guidance which covers the audit of computerized accounting systems for tax purposes, an audit trail is a created record containing   the progress of individual records data from inception to final recording in the accounts together with amendments to standing data held in master files    The trail may also record for each entry a number of links to other associated processes and events such as receipts, payments, and stock inventories, all of which may have their own system audit trails In essence,   information on a  tax  return should be both traceable    and capable of reconciliation back to accounting and business records.

**Entries**

There are six main categories of entry that feature in the overall audit trail:

- General ledger and financial statements;

- Subsidiary ledgers, e.g. accounts receivable and account payable ledgers;

- Source documents, e.g. invoices, credit notes ; journals.

- Data journals based on accumulation records, e.g. detail and summary records of cash received, payrolls etc.;

- Records of amendments to standing data held in master files; and

- Other accounting and non-accounting data.

Note that while it was for many years the mark of a good paper-based accounting system to have a full and visible audit trail, the practicalities of electronic records found in computerized accounting systems means that audit trails even while complete, will now be invisible at certain points to the auditor.

**Issues for auditors and developers**

- Standing data additions and amendments - Changes to relevant data such as codes, rates, product & customer liabilities, currency changes etc., together with identification as to who made the changes should be recorded in a separate log file.

- Entry data - System should create and retain a visible or retrievable audit trail that records the processing of an entry from source information or documents to final recording in ledgers.  For indirect taxes this will particularly include posting of tax amounts into the account used for completion of the tax return.

- Transaction feeder systems - A visible or retrievable audit trail should be maintained to record the operation of interface points between entry files and General Ledgers. Particular attention should be given to ensuring that any entries that fail interface control procedures are reported for corrective action, and any such action should be evidenced.

- Electronic messages - In the case of transactions covered by a trading partner agreement of electronic data interchange (EDI), the electronic record(s) including functional acknowledgments have to be kept.   This also applies to XML

transactions that may be transformed into human readable document by use of a style sheet, which also should be retained.

- Data format conversion - Where electronically kept records are converted from one format to another, such conversion must not result in a loss, destruction, or alteration of information and data relevant to the determination of taxes payable, collected, or withheld. Although software design should help achieve this, ultimately it is the taxpayer's responsibility to ensure that converted records are reliable and readable.

- Changes to business systems - Major changes to electronic record keeping systems should be properly documented in order to preserve an accurate chronological record. Upgraded software should also be capable of reading data processed by an earlier version. Audit trails must be designed to ensure that details underlying the summary accounting data, such as entries, invoices and vouchers, must be easily identified and made available to auditors.

In summary, business application software should create and then retain a retrievable audit trail that records the processing of entries from source information or documents to final recording in   tax returns and in reverse. It is also important that any amendments to tax relevant data (including identification of the amender) should be recorded in a separate file.   For indirect taxes this will in particular include posting of tax amounts into the account used for completion of the tax return.  Conversion of electronic records from one format to another should not result in any loss of original information.

# ANNEX 4 - RELIABLE RECORDS

To achieve a set of reliable electronic records is one outcome of internal controls. A reliable electronic record is a record whose contents can be trusted as a full and accurate representation of the original entry. In order to achieve the appropriate level of trust, the record should also display sufficient levels of authenticity, integrity, and usability[4].

Computerised accounting systems, particularly those used for electronic commerce may feature the creation and retention of records and documents that are wholly electronic, and as a result may be regarded by auditors as being potentially less reliable than their paper equivalents. This perceived loss in reliability can often be overcome by the use of techniques that provide additional levels of assurance. For example, within the European Union, the Invoicing Directive[5] obliges Member States to accept invoices sent by electronic means provided that the authenticity of origin and integrity of the contents are guaranteed by means of:

- An advanced electronic signature[6]. (Member states may however ask for the advanced electronic signature to be based on a qualified certificate and created by a secure-signature-creation device[7]); or

- Electronic data interchange (EDI)[8] when the agreement relating to the exchange provides for the use of procedures guaranteeing the authenticity of the origin and integrity of the data. (A Member State may however require production of an additional summary paper document).

It should be noted that the Invoicing Directive also allows Member States to accept electronic documents, such as invoices, that are guaranteed by other means approved by the jurisdictions.

The evolution of computerized accounting systems has led to a distinction being drawn between records of entries which are held electronically in the system and the source documents (invoices/credit notes) which support these electronic records. Increasingly these source documents, including documents produced externally by third parties, are themselves received and retained electronically by use of scanning technologies along with system-generated records. These electronic source documents must be subject to appropriate security controls, both in terms of access and to prevent either deliberate or erroneous amendments or deletions. There is a growing trend for businesses to send and receive order and invoice information via the SMTP protocol via specialist SMTP servers. In the case of these and other invoice creation systems, sufficient levels of reliability must be obtained by other means. For example, control documents generated in a sales ordering process could be used to support the authenticity of the origin and integrity of the invoice provided the business can demonstrate a high level of integrity in their electronic and other internal control system over time. The use of these types of techniques can enable both private and tax auditors to obtain levels of assurance with respect to the reliability of invoices and, eventually financial statements, to the same degree as in a traditional paper environment.

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4 ISO 15489 Information and documentation – Records management. Part 1 General.

5 Council Directive 2001/115/EC of 20 December 2001 amending Directive 77/388/EEC with a view of simplifying, modernising and harmonising the conditions laid down for invoicing in respect of value added tax. This can be found at:

http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=32001L0115&model=guichett

6 See article 2 (2) of Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures.

7 See article 2 (6) and (10) of Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures.

8 As defined in article 2 of Commission Recommendation 1994/820/EC of 19 October 1994 relating to the legal aspects of electronic data interchange.

A survey among OECD members has shown that some jurisdictions[9] have already introduced specific requirements to ensure the reliability of electronic documents. A review of these requirements indicates that countries have adopted different approaches. Many countries have passed legislation that recognises the equivalence of electronic documents as evidence when they make appropriate use of electronic signatures based upon electronic certificates. However in many other countries there is a lack of availability of electronic certificates that meet a sufficient level of integrity.

**Security**

The application of security services in conjunction with appropriate technologies to both the system and the records held therein is a key requirement in achieving reliable records kept and maintained to a satisfactory standard (but note that such controls will not prevent fraud involving the deliberate omission of records kept outside of normal accounting systems).

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9 For example, Switzerland and members of the EU.

# ANNEX 5 – COMPLIANCE AND SUBSTANTIVE TESTING

**Introduction**

As previously noted in paragraph 16, the objective of a tax audit is to obtain sufficient audit evidence as part of the assurance process in order to be able to draw reasonable conclusions on which to base an audit opinion as to whether or not tax returns are prepared in accordance with domestic legislation.  An important step in gaining assurance is the testing of internal controls and entry data held in computerized accounting systems by use of   computer assisted audit techniques.

**Suggested test programme for auditors**

This annex outlines the types of tests that can be applied by auditors to check tax declarations.   These   may be performed using set testing routines applied to a Standard Audit File, by bespoke testing of data, or by any combination of both according to circumstances and the methodology employed.  Please also note the following:

- A system of entry-based tests that can be applied in both direct and indirect taxation regimes is envisaged here.

- Similar tests for other entries can be developed according to need.

- The outcome of testing is often to indicate **possible** errors, with individual entries warranting further investigation being identified through exception reporting.   Results of running tests would be to either give reasonable assurance as to the correctness of a tax declaration, or alert the auditor to queries that may require further investigation.  It follows therefore that testing in isolation will not necessarily replace an audit, but rather form part of an overall assurance program.

- Many of these tests are standardised in that most audits have similar objectives, and most systems have the at least the potential for similar types of control weakness, e.g. duplicate payments to suppliers etc.  The use of a standardised test programme using data in a standard format as at baseline while still allowing for bespoke testing as required would offer considerable audit efficiencies at reduced costs.

**General tests**

Tests under this heading usually summarize information held at entry level, e.g. by document type or tax code, and generate control totals or make arithmetic checks which may identify individual entries.

**Tests on individual ledgers (general, sales, purchases)**

These tests require access to entry-level data. Exception reporting is heavily featured, as are comparative tests such as for duplicate purchase invoices.

**Checks on standing data**

These tests are aimed at verifying standing data used to process entries, often tax-critical data such as product liability, and customer location.

**Implementation**

This test programme can be implemented in one of three ways or as a combination of each:

- External examination by auditors using proprietary audit software. This approach generally requires the data to be copied onto removable media and audited remotely.

- By use of Resident Audit Programs. Building compliance into traders' systems will give improvements in business' tax behaviour and allow them to self-assess their tax compliance without having to expend any additional effort. Modern accounting systems typically include flexible reporting functionality that would allow both the business and the tax auditor to monitor tax areas of specific risk in an efficient and effective way. Since these reporting tools reside on the business systems they are generically known as Resident Audit Programs.

- By use of Continuous Audit techniques. This is a special case of Resident Audit Programs. As the name suggests continuous audit programs would monitor tax entries "as they happen", and could immediately notify both the business and its tax authority of potential problems. The ability to monitor and correct, if necessary, tax entries prior to making a revenue declaration could save the business significant compliance costs. Real-time notification of selected tax entries could also result in more efficient use of tax authority resources since it would bring the assurance event closer in time to the actual tax event.

The ability for users to monitor and correct, if necessary, tax entries prior to making a revenue declaration could save the business significant compliance costs. Real-time notification of selected tax entries could also result in more efficient use of tax authority resources since it would bring the assurance event closer in time to the actual tax event.

Revenue Authorities should collaborate on future work and research in order to come up with a suggested set of substantive tests, both for direct and indirect tax purposes.

# ANNEX 6 – THE STANDARD AUDIT FILE -TAX (SAF-T)

**Introduction**

SAF-T is a file containing reliable accounting data exported from an original accounting system, for a specific time period, easily readable by virtue of     its standardisation of layout and format, and one that is extensible according to need.   It has been developed in response to the situation encountered in modern accounting systems that are entirely electronic.    The established practice of testing the operation of internal control procedures from scrutiny of contemporary paper documents containing control information is therefore no longer universally applicable and wholly inappropriate in these systems where testing has to be performed electronically.    SAF-T has    been designed to allow auditors access to data in an easily readable format for substantive testing of system controls and data using proprietary audit software as part of a methodology that also provides increased effectiveness and productivity for computer-assisted audit while at the same time reducing compliance costs for business that would otherwise need to devote additional resources to produce this data in a readable format. The SAF-T should only contain reliable information, and thus the internal controls placed on entries processed by the system are a key element in its overall reliability.

SAF-T is intended to be suitable for use for businesses and their auditors across the scale from MNEs to SMEs, although there may be some differences in its application. In the case of MNEs auditors are likely to need access to large volumes of data held in complex structures and handle these in a satisfactory manner in order to support test programmes; it may be in these instances a bespoke approach is more appropriate. However this will not be the case on every occasion, so developers of the more complex ERP systems should be able to map their products   to the requirements of the SAF-T to give the necessary data elements, and thus facilitate the full range of tests using this method.   For SMEs the data structure of the SAF-T is expected to be a list of the data elements ordinarily held on these systems and their completeness or otherwise will determine the range of tests available to auditors.  Nevertheless, the  design of SAF-T also takes into account that not all of its data elements will be available on every system.

Internet based e-commerce   has also changed the way in which business is   conducted, particularly for SMEs who now have access to international markets on an unprecedented scale and can operate in ways that due to cost and complexity were previously the preserve of larger businesses.    This growth in international trading brings with it additional compliance burdens for business in the shape of    differing    regulatory requirements for each jurisdiction.     For example, the EU Invoicing Directive and the VAT & E-commerce Directive make it increasingly common for records relating to entries made within a particular jurisdiction to be held in another.   The incorporation of SAF-T into business systems covering the entire spectrum from the ERP systems used by MNEs to the accounting software packages used by SMEs offers in part a solution to the problems businesses and tax auditors may encounter in this regard.  It should however be recognised that incorporation of an audit file into accounting software will not preclude the requirement for businesses to keep records in accordance with conditions laid down by revenue authorities.

The determination of tax liability of direct and indirect taxes may require information not normally found in an accounting system; therefore more information than is contained in the SAF-T could be required. In many cases a SAF-T will facilitate a wide range of substantive tests. But there will be areas of tax where auditors require further information and engagement with a business to ensure compliance.   Tax authorities and accounting firms using SAF-T will still need to verify original records maintained by a business. The modular design of the SAF-T will facilitate its future development to embrace other requirements.

## General principles

Any SAF-T produced from computerised accounting systems across the scale from ERP systems to software packages should reflect the following general requirements:

*Readable format*

The SAF-T should be created in a format that is non-proprietary and in common use around the world. Auditors need an audit file that is easy to work with, and the complementary SAF-T document addresses this issue. SAF-T may be accessed directly by proprietary audit software or used as a transport mechanism to create efficient data structures that can    be accessed in turn.

*Ability to be produced upon request*

Since tax authorities may verify books and records of previous years, business should be able to produce upon request, an audit file not only for the current year but also for any past period subject to audit in accordance with domestic legislation.

*Data Content*

 In order for the SAF-T to be a    useful and reliable source of audit information for different taxes, the data content should include all relevant data necessary to verify the accounts, including balance sheet as well as Income and Expenditure    statements, together with all entries and opening balances. The dataset produced will in turn be determined by the level of detail routinely input to each individual accounting system.

*Extensibility*

Extensibility is a key feature of SAF-T design and is essential for its successful implementation by stakeholders. This flexibility can be expressed in terms of format, content and structure to meet the requirements for different tax regimes and different jurisdictions. These differing requirements could more easily be met by a modular design, which also addresses potential problems with non-integrated accounting systems.

A full description of the key data elements recommended for SAF-T will be found in the complementary   paper "Guidance for the Standard Audit File - Tax"

## Future development

Experiences in a number of countries has shown that the SAF-T requirement is not confined to tax auditing, e.g. one tax authority who initially defined a 'standard audit file' that could be incorporated as a feature in accounting packages on a voluntary basis, have found that private accountants and other parties have since taken over the initiative and an XML audit file is now created and maintained for multiple purposes.

A number of additional benefits for stakeholders using SAF-T have been identified, some of which can be regarded as developments beyond the needs of tax auditing:

- It will facilitate agreement between tax authorities and business regarding the data content of businesses systems for tax purposes;

- It will reduce compliance costs for business that would otherwise need to devote additional resources or rely on specialist personnel or consultants to produce requested information data in a readable format;

- Easy access to required information will reduce compliance administration costs of tax authorities;

- Regular use of the standard audit file in largely automated testing procedures will increase efficiency and effectiveness of audit;

- Well-known and widely accepted standards will facilitate software development. SAF-T implementation may reduce the cost to business of meeting compliance requirements for multiple jurisdictions, thus making the software more attractive to customers;

- The SAF-T can be used to exchange tax accounting data between all parties in the financial chain such as accountants, tax consultants, tax administrations or other Government bodies. Use of SAF-T also offers all parties the opportunity to build their own software around a SAF-T that satisfies their information needs. SMEs can combine data from several different packages that it may use while MNEs are capable of exchanging data between different branches that may work with different accounting software;

- Businesses can use SAF-T to create an archive of tax relevant data that offers portability when changing from one accountant to another.

- SAF-T will encourage better archival procedures for businesses;

- The development of separate SAF-Ts for specialised Revenue regimes such as payroll taxes.

# ANNEX 7 - ARCHIVAL CONSIDERATIONS

**Introduction**

Financial statements are the most common method by which a business presents its results to a wider audience. By auditing these financial statements, auditors provide assurance to others that the financial statements reflect the economic events that occurred during the accounting period, which is usually one year. After the financial statements have been audited there is often no commercial need to keep all source documents and accounting records that support the financial statements.

Tax authorities also perform audits on the basis of the annual financial statements of the business. In order to keep the costs of administration at an acceptable level most (but not all) tax administrations will audit the tax returns and financial statements of a business not on an annual basis but less frequently and cover longer periods of time. The balance between the additional costs for businesses to retain source documents and accounting records longer than strictly needed for commercial reasons and the need for tax authorities to minimise the costs of effective administration is codified in most countries by an according retention period for books and records. This period will differ between jurisdictions.

The rapid development in computer technologies has changed the way of exchanging information between businesses, which is reflected in archiving procedures. Source documents on paper are either being replaced by their electronic equivalents, or are being scanned and stored electronically as image files.

**Creating an archive**

Business systems at the end of an accounting period will either archive entry and other information in its entirety or perform a degree of purging after it has been summarised for posting to the General Ledger system. These systems should provide the user with an option to easily copy the detailed information to a storage medium that will be kept for future audit, thus creating a secondary archive for tax purposes.

If a tax auditor needs to examine documentary evidence of internal controls or source documents for entries outside of the current period, it may be necessary to retrieve these documents from either archive. Maintenance of records for a particular length of time is likely to be a statutory requirement determined by the legislation applicable in a particular jurisdiction. The auditor must have the assurance that an archived source document or accounting record is capable of being verified as an original, meaning that the record being produced is identical to the one on which the original accounting entry was based. It is important to ensure that an electronic record is readable for humans even after the passage of an extended period of time as, unlike paper documents, electronic data cannot be read directly. Storage over a long period therefore creates the possibility of problems arising such as availability, data loss and data intelligibility. These considerations apply to both records that were originally electronic, and to those paper originals stored as image files.

The reliability of data contained in SAF-T depends on the ability of business systems and sub-systems to capture relevant information and transfer it to the File, and an archive must also be able to create the File when required.

**Availability of data**

The message formats computerized accounting systems are both diverse and continually advancing. While businesses can usually produce electronic records relating to recent accounting periods they are often not capable of presenting older data in a readable form because of changes in hardware, software and data file formats. Although master files will usually be converted to a new format this may often not be the case for entry data and other source documents. In practice there are three methods to ensure that older data are available when required for audit purposes:

1. The business may store the data in its original form and maintain the old software and/or hardware that is able to access and reproduce the data in a readable form;

2. The business may convert the data into the form that can be read by the new software and/or hardware;

3. The business may convert the data into a software and hardware independent universal file format that can be read by most common available database packages, like CSV, Dbase, and XML etc. The requirements of tax authorities could be met in this regard by populating SAF-T with relevant data.

In case of any data conversion the business should ensure the completeness and correctness of the conversion, which should be substantiated by appropriate evidence.

## Integrity of data

A key issue for auditors is assurance regarding the integrity of data stored. The following methods should be considered in order to maintain data integrity when records are retained over a long period of time:

- Records that exist individually as object files, such as Rich Text and XML files prescribed as unique based on the bit string, will retain integrity if it can be ensured that the bit string is not altered during the time of retention.

- Encryption of the archived file and secure archival of the encryption keys for decryption at the time of retrieval. Archival of a key and its binding is required if an assured copy of a key might be required in the future. For example, as evidence of the validity of an old electronic signature for non-repudiation purposes, such archives must be very well protected as the integrity and in some cases the confidentiality of the key must be maintained. In some cases, when physical security of a key is impractical, and in particular when it needs to be communicated from one place to another, the key must be protected by other means such as assignment to a trusted party; use of dual-control system where by a key is split into two parts with each part being entrusted to a separate person; and environmental controls for purposes of communication or intermediate storage or protection during communication by confidentiality and/or integrity services such as by encryption under another key. It should be noted that all keys have a specified life cycle. However, most of the Public Key Infrastructure (PKI) systems permit one further use of the key under the recovery mode even if the life cycle duration has passed.

- When individual records exist only within a Data Base Management System (DBMS), the record extracted into universal file format data becomes the basis for verifying it as the original record and the database itself become the original, i.e. data backed-up over a fixed period becomes the original version. Because database files are often large, back-up methods utilising a combination of full and "amendment only" backups would probably be utilised.

The first method thus described would likely to be adopted expressly for the purposes of auditing. However it requires supporting information to be available and therefore has shortcomings. The second method can be applied to any files provided key management and file recovery procedures are clearly defined. The third method requires strong internal controls over the information systems accessing the database in order to ensure

integrity.  It also requires the storage of large amounts of data.  Ultimately the choice of methods will be a matter of policy for an organization.

System back ups and archival routines based on an "amendment only" method are riskier than full backups, and therefore the latter procedure should be preferred.

In summary, archive procedures should ensure the integrity and readability of electronic records after an extended period. Digital signatures should be secured using encryption and hash functions; encryption keys should be secured by storage with an independent party.  An independent party should secure the encryption keys, and for these to be readily retrieved for file decryption; and time stamping should be secured using the hash function to assure the hash totals.