





















system/software *quality*. Identify the authorities responsible for approving deviations.

- *MTP Section 2.3.4*: Control procedures. Identify control procedures applied to the test activities. These procedures describe how the software-based system and software products and test results will be configured, protected, and stored. These procedures may describe *quality* assurance, configuration management, data management, or other activities if they are not addressed by other efforts. Describe how the test activities comply with existing security provisions and how the test results are to be protected from unauthorized alterations.
- *MTP Section 2.3.5*: Standards, practices, and conventions. Identify the standards, practices, and conventions that govern the performance of testing tasks including, but not limited to, internal organizational standards, practices, and policies.
- *MTP Section 2.4*: Test reporting requirements. Specify the purpose, content, format, recipients, and timing of all test reports. Test reporting consists of Test Logs (Clause 13), Anomaly Reports (Clause 14), Level Interim Test Status Report(s) (Clause 15), Level Test Report(s) (Clause 16), and the Master Test Report (Clause 17). Test reporting may also include optional reports defined by the user of this standard. The format and grouping of the optional reports are user defined and will vary according to subject matter. [41]
- *MTP Section 3*: General. Introduce the following subordinate sections. This section includes the glossary of terms and acronyms. It also describes the frequency and the process by which the MTP is changed and baselined. It may also contain a change-page containing the history of the changes (date, reason for change, and who initiated the change).
  - *MTP Section 3.1*: Glossary. Provide an alphabetical list of terms that may require definition for the users of the MTP with their corresponding definitions. This includes acronyms. There may also be a reference to a project glossary, possibly posted online.
  - *MTP section 3.2*: Document change procedures and history. Specify the means for identifying, approving, implementing, and recording changes to the MTP. This may be recorded in an overall configuration management system that is documented in a Configuration Management Plan that is referenced here. The change procedures need to include a log of all of the changes that have occurred since the inception of the MTP. This may include a Document ID (every testing document should have a unique ID connected to the system project), version number (sequential starting with first approved version), description of document changes, reason for changes (e.g., audit comments, team review, system changes), name of person making changes, and role of person to document (e.g., document author, project manager, system owner). This information is commonly

put on an early page in the document (after the title page and before Section 1). Some organizations put this information at the end of the document. [41]

As parts of MTP, The IEEE divides test activity in eight defined stages of software testing, each stage potentially producing its own separate type of document.

- *Test Plan*: A detail of how the test will proceed, who will do the testing, what will be tested, in how much time the test will take place, and to what *quality* level the test will be performed.
  - *Test Design Specification*: A detail of the test conditions and the expected outcome. This document also includes details of how a successful test will be recognized.
  - *Test Case Specification*: A detail of the specific data that is necessary to run tests based on the conditions identified in the previous stage.
  - *Test Procedure Specification*: A detail of how the tester will physically run the test, the physical set-up required, and the procedure steps that need to be followed.
  - *Test Item Transmittal Report*: A detail of when specific tested items have been passed from one stage of testing to another.
  - *Test Log*: A detail of what tests cases were run, who ran the tests, in what order they were run, and whether or not individual tests were passed or failed.
  - *Test Incident Report*: A detail of the actual versus expected results of a test, when a test has failed, and anything indicating why the test failed.
  - *Test Summary Report*: A detail of all the important information to come out of the testing procedure, including an assessment of how well the testing was performed, an assessment of the *quality* of the system, any incidents that occurred, and a record of what testing was done and how long it took to be used in future test planning. This final document is used to determine if the software being tested is viable enough to proceed to the next stage of development.
- Given this, one can say that a *standardized test* is a test that is administered and scored in a consistent, or organized, manner. Standardized tests are designed in such a way that the questions, conditions for administering, scoring procedures, and interpretations are consistent and are administered and scored in a predetermined, standard manner [41].
- In addition, we could remind other useful testing standards as: *BS-7925-1 Software Testing – Vocabulary* (This standard gives terms and definitions to aid communication in software testing and related disciplines), *BS-7925-2 Standard for Software Component Testing* (it defines the process for software component testing using specified test case design and measurement techniques. This will enable users of the standard to directly improve the quality of their software testing, and improve the quality of their software products), or *IEEE 1008 Software Unit Testing* (for bidirectional parallel communications between personal computers and printing peripherals).

One of the main advantages of standardized testing is that the results can be empirically documented. Therefore, the test scores can be shown to have a relative degree of validity and reliability, as well as results can be generalized and replicated; another advantage is aggregation. A well designed standardized test provides an assessment of a typology of IT projects and which, when applied, will reflect the project value according to the general standardized quality requirements; but do not forget that a standard applied “cannot measure initiative, creativity, imagination, conceptual thinking, curiosity, effort, [...], nuance...”(as Bill Ayers said).[41]

#### B. Some Considerations about Information Security Standards

Security in the field of IT was and still is a controversial and current problem. For any company, the dangers and threats concerning the information they possess come both from outside and from inside (the company’s employees).

Following a survey conducted by Earnast & Young company on information security within a Romanian company involved in the field of IT, the findings were difficult to predict: only 53% of the organizations have business continuity plans in case of a possible security attack, while only 41% of the organizations are concerned about internal attacks on their systems, although it is known that currently the highest number of attacks comes from inside the company.

As nowadays the information systems are in fact “the heart of a business”, because “organizations are more dependent than ever on the reliable operation of their information systems”[44]. Therefore it is obvious that the need of information security is a very high one. The International Organization for Standardization (ISO) and the International Electro-technical Commission (IEC), which represents a specialized international system for standardization at world level, “adopted” the standards with the best practices and methodologies in the field of information security.

“Information security is the process of protecting information. It protects its availability, privacy and integrity.”[45] Thus, for the companies that need to implement an information security management or to improve the usual security practices, the standard ISO/IEC 17799:2005 was adopted, which is known at present as *ISO/IEC 27002:2005* or *the Code of Practice for Information Security Management*. It “sets out the guidelines and general principles for organizations in order to initiate, implement, maintain and improve the information security management” [47]. The standard *ISO/IEC 27002:2005* establishes the best practices and methodologies in the field of Information Security Management for the following sectors: “security policy; organization of information security; management; physical and environmental security; communicational and operational management; access control; information systems purchase, their development and maintenance; continuous business management” [47]. We have also to add the fact that this standard is concerned only with *information*: electronic files,

paper documents, recordings (video, audio), communications and messages.

Another standard “adopted” by ISO and IEC is the ISO/IEC 27001:2005 standard or *Information technology - Security techniques - Information Security Management Systems (ISMSs) – Requirements*. This standard is also known as BS 7799-2:2002. It “establishes the requirements for an ISMS”[47].

The ISO/IEC 27001:2005 standard belongs to the series of ISO/IEC 27000 standards. “The series provides best practice recommendations on information security management, risks and controls within the context of an overall ISMSs, similar in design to management systems for quality assurance (the ISO 9000 series) and environmental protection (the ISO 14000 series).”[48] Also, this series of standards “is deliberately broad in scope, covering more than just privacy, confidentiality and IT or technical security issues. It is applicable to organizations of all shapes and sizes. All organizations are encouraged to assess their information security risks, then implement appropriate information security controls according to their needs, using the guidance and suggestions where relevant”[48].

#### IV. CONCLUSION

As nowadays the *information* which is “behind” the information systems in fact stands for *power*, it is normal “to safeguard” it very carefully. Without *information*, it is practically impossible for a company to cope with competition, it is impossible to achieve its set objectives, so “it is absolutely vital that information systems (IS) are properly assured from the very beginning, due to the potential losses faced by organizations that put their trust in all these IS”[49]. Among the features that standards usage offers concerning the software information systems field, the following can be included: increased productivity, allowing developers to reduce the demands and time of writing new code for the integration of two or more software products; ability to access real time information and support, regardless of platform used, including mainframe environments, different operating systems, hardware variety, target users, heterogeneous businesses having each of them distinct specific activities; optimization based on costs, allowing inter-connected enterprises to reduce time spent to unify search operations, reporting, integration between different information systems. Time spent on writing standards and unifying guidelines and rules leads to work *quality*, *performance* and *efficiency*, it allows customers to accelerate business integration processes, and developers to increase productivity. Therefore, the need for applying some standards of good practice and methodology in the field of the information technology is very high.

#### REFERENCES

- [1] R. Bojanc, and B. Jerman-Blazic, “Towards a standard approach for quantifying an ICT security investment”, *Computer Standards & Interfaces*, no. 30, 2008, pp. 216–222, (ISI Thomson).

- [2] "Corporate governance of information technology", *Wikipedia, the free encyclopedia* [Online]. Available: [http://en.wikipedia.org/wiki/Corporate\\_governance\\_of\\_information\\_technology](http://en.wikipedia.org/wiki/Corporate_governance_of_information_technology)
- [3] C. Feltus, "Introducing ISO/IEC 38500: Corporate Governance in ICT", *ITSMF Jaarcongres 2008*, 27-28/10/2008, Nijkerk, Netherlands.
- [4] CGIT1 Corporate Governance of IT [Online]. Available: <http://standards.incits.org/a/public/group/cgit1>
- [5] Richard Brisebois, Greg Boyd, and Ziad Shadid, "What is IT Governance? and why is it important for the IS auditor" [Online]. Available: [http://www.intosaitaudit.org/intoit\\_articles/25\\_p30top35.pdf](http://www.intosaitaudit.org/intoit_articles/25_p30top35.pdf)
- [6] ISO - International Organization for Standardization site, "ISO/IEC standard for corporate governance of information technology" [Online]. Available: <http://www.iso.org/iso/pressrelease.htm?refid=Ref1135>
- [7] Security Zone: The ISO/IEC 38500 IT governance standard [Online]. Available: <http://www.riskmanagementstudio.com/index.php/en/knowledge-center-articles/247-security-zone-the-isoiec-38500-it-governance-standard>
- [8] M. Velicanu, D. Litan, L. Copcea (Teohari), M. Teohari, A.M. Mocanu (Virgolic), I. Surugiu, and O. Raduta, "Ways to Increase the Efficiency of Information Systems", *Proceedings of the 10th WSEAS International Conference on Artificial Intelligence, Knowledge Engineering and Databases (AIKED '11)*, Cambridge, UK, February 20-22, 2011, pp. 211-216, ISSN: 1792-8125, ISBN: 978-960-474-273-8 (ISI Thomson proceedings).
- [9] "EAI Best Practices", *Miracle Software Systems*, January 20, 2007 [Online]. Available: <http://w3.miraclesoft.com/msws/msoft/downloads/Miracle%20EAI%20BestPractices.doc>
- [10] Usha Batra, Saurabh Mukherjee, "Software design patterns for message driven service oriented integration of stovepipe applications in healthcare enterprise", *Proceedings of the 10th WSEAS International Conference on Applied Computer and Applied Computational Science*, Venice, Italy, March 8-10, 2011, pp. 211-216, ISSN: 1792-8559, ISBN: 978-960-474-281-3 (ISI Thomson proceedings).
- [11] Integration Consortium site [Online]. Available: <http://www.integrationconsortium.org>
- [12] G. Hohpe, and B. Woolf, *Enterprise Integration Patterns: Designing, Building and Deploying Messaging Solutions*, Addison-Wesley, 2004.
- [13] D. Trowbridge, U. Roxburg, G. Hohpe, D. Manolescu, and E. G. Nadhan, *Integration Patterns*, Microsoft, 2004.
- [14] "About OGC (Open Geospatial Consortium)", *Open Geospatial Consortium site* [Online]. Available: <http://www.opengeospatial.org/ogc>
- [15] "OpenGIS® GO-1 Application Objects", *Open Geospatial Consortium*, 2005 [Online]. Available: <http://www.opengeospatial.org/standards>
- [16] K. Stolze, "SQL/MM Spatial: The Standard to Manage Spatial Data in Relational Database Systems", *Lecture Notes in Informatics (LNI)*, vol. 26, 2003, pp. 247-264.
- [17] "OpenGIS® Implementation Specification for Geographic information - Simple feature access - Part 1: Common architecture", *Open Geospatial Consortium site*, 2006 [Online]. Available: <http://www.opengeospatial.org/standards>
- [18] "Well-known text", *Wikipedia, the free encyclopedia* [Online]. Available: [http://en.wikipedia.org/wiki/Well-known\\_text](http://en.wikipedia.org/wiki/Well-known_text)
- [19] Aura-Mihaela MOCANU, Manole Velicanu, "Building a Spatial Database for Romanian Archaeological Sites", *Database Systems Journal*, Vol. II, No. 1, pp. 3-12, 2011.
- [20] Komarkova Jitka, Machova Renata, "Some Problems Connected to Utilization of Internet Geographic Information Systems", *Proceedings of the 6th WSEAS International Conference on Multimedia, Internet & Video Technologies*, Lisbon, Portugal, September 22-24, 2006, pp. 102 - 107 (ISI Thomson proceedings).
- [21] A. Belussi, M. Negri, G. Pelagatti, "GEOUML: A Geographic Conceptual Model Defined Through Specialization of ISO TC211 Standards", *10th EC GI & GIS Workshop*, Warsaw, Poland, 23-25 June 2004 [Online]. Available: <http://www.comp.dit.ie/pbrowne/MScSpatial%20Information%20Management/UMLISO2.pdf>
- [22] C. Pegoraro, M. Velluto, "Semantic search engine for geographic data", *2nd Workshop COST Action C21 - Townology*, 2007 [Online]. Available: <http://www.townology.net/Meetings/0710-Torino/articles/07Paper%20%2883-99%29.pdf>
- [23] Noor Habibah Arshad, Fuziah Abu Hanifah, "Issues and Challenges in NSDI Implementation", *Proceedings of the 9th WSEAS International Conference on System Science and Simulation in Engineering*, Japan, October 4 - 6, 2010, pp. 65 - 70 (ISI Thomson proceedings).
- [24] "OpenGIS® Catalogue Services Specification", *Open Geospatial Consortium*, 2005 [Online]. Available: <http://www.opengeospatial.org/standards>
- [25] "OpenGIS® Implementation Standard for Geographic information - Simple feature access - Part 2: SQL option", *Open Geospatial Consortium*, 2010 [Online]. Available: <http://www.opengeospatial.org/standards>
- [26] S. Davis, *GIS for Web Developers*, Pragmatic Bookshelf, 2007.
- [27] Ahmet Sayar, Marlon Pierce, "Geoffrey Fox, Integrating AJAX Approach into GIS Visualization Web Services", *Proceedings of the Advanced International Conference on Telecommunications / Internet and Web Applications and Services*, Los Alamitos, CA, USA, 2006, pp. 169.
- [28] David Chappell (Chappell & Associates), "SOAP vs. REST: Complements or Competitors?", *The 2009 Developer Summit Proceedings* [Online]. Available: [http://proceedings.esri.com/library/userconf/devsummit09/papers/keynote\\_chappell.pdf](http://proceedings.esri.com/library/userconf/devsummit09/papers/keynote_chappell.pdf)
- [29] "OpenGIS Abstract Specification Topic 12: OpenGIS Service Architecture", *Open Geospatial Consortium*, 2002 [Online]. Available: <http://www.opengeospatial.org/standards>
- [30] D. Litan, D. M. A. Marinescu, E. Mittel, G.D. Stoian, "Innovation in <<Globalization Era>> - Development and Implementation of Information Systems Financed from European Funds", *Proceedings of the 5th WSEAS International Conference on Business Administration (ICBA '11)*, Puerto Morelos, Mexico, January 29-31, 2011, pp. 70-75, ISSN: 1792-734X, ISBN: 978-960-474-269-1 (ISI Thomson proceedings).
- [31] "e-Government Technical Standards", Department of Finance and Personnel, UK - Information Strategy and Innovation Division [Online]. Available: <http://www.dfpni.gov.uk/egov-technical-standards>
- [32] "Standards and Architectures for e-government Applications (SAGA)", Version 2.0, *KBSI Publication Series*, Published by the Federal Ministry of the Interior, Berlin, Germany, vol. 59, Dec. 2003, ISSN 0179-7263.
- [33] e-Macao Program - Implementing Public Administration Roadmap through Electronic Government site [Online]. Available: <http://www.emacao.egov.iist.unu.edu/index.php/emacao/projects/Standards-and-Best-Practices-for-e-Government-in-Macao>
- [34] e-Governance Standards Portal, Standards and Architecture for e-Governance Applications - India, site [Online]. Available: <http://egovstandards.gov.in>
- [35] "Web Standards", *E-government in New Zealand*, site [Online]. Available: <http://www.e.govt.nz/standards/web-standards>
- [36] New Zealand Government Web Standards, site [Online]. Available: <http://www.webstandards.govt.nz/meeting-the-standards>
- [37] "eGovernment: Standards and guidelines", The eGovernment website of Tasmania [Online]. Available: [http://www.egovernment.tas.gov.au/standards\\_and\\_guidelines](http://www.egovernment.tas.gov.au/standards_and_guidelines)
- [38] D. Harris, L. Khan, R. Paul, and B. Thuraisingham, "Standards for secure data sharing across organizations", *Computer Standards & Interfaces*, no. 29, 2007, pp. 86-96, (ISI Thomson).
- [39] K. P. See, T. Shiang-Yen, N. L. Abdullah, R. Idrus, "Exploring User's Perception toward Automated Checkout Trolley in Developing Countries", *Computers and Simulation in Modern Science*, Vol. V, pp. 36-42, 2011, ISSN: 1792-6882, ISBN: 978-960-474-300-1, WSEAS Press.
- [40] S. K. Yazdi, B. Skakouri, "The Effect of Environment on Mine", *Computers and Simulation in Modern Science*, Vol. V, pp. 53-59, 2011, ISSN: 1792-6882, ISBN: 978-960-474-300-1, WSEAS Press.
- [41] Institute of Electrical and Electronics Engineers, *IEEE 829-2008. IEEE Standard for Software and System Test Documentation*, 2008.
- [42] SEPT-Supplying Software Engineering Standards Information to the World site [Online]. Available: <http://www.12207.com/test1.htm>
- [43] The Stanford University InfoLab site [Online]. Available: <http://infolab.stanford.edu>

- [44] K. J. Knapp, R. F. Morris, Jr., T. E. Marshall, and T. A. Byrd, "Information security policy: An organizational-level process model", *Computers & Security*, no. 28, 2009, pp. 493–508, (ISI Thomson).
- [45] "What is Information Security?", *WiseGEEK: clear answers for common questions site* [Online]. Available: <http://www.wisegeek.com/what-is-information-security.htm>
- [46] Standarde de securitate [Online]. Available: <http://www.securitatea-informatica.ro/standarde-securitate/standarde-de-securitate>
- [47] Buzzle Web Portal: Intelligent Life on the Web site [Online]. Available: <http://www.buzzle.com/articles>
- [48] "ISO/IEC 27000-series", *Wikipedia, the free encyclopedia* [Online]. Available: [http://en.wikipedia.org/wiki/ISO/IEC\\_27000-series](http://en.wikipedia.org/wiki/ISO/IEC_27000-series)
- [49] D. Mellado, E. Fernandez-Molina, and M. Piattini, "Towards security requirements management for software product lines: A security domain requirements engineering process", *Computer Standards & Interfaces*, no. 30, 2008, pp. 361–371, (ISI Thomson).



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  - "Business Intelligence and Data warehouse – Technological Support for Decisional Management in Geographical Information Systems", *Proc. of the 3rd International Conference on Communications and Information Technology (CIT'09)*, December 29-31, 2009, Athens, Greece;
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- "Market Research – a significant step in propelling a business or a solution for the e-government systems to the top", *International Journal of Applied Mathematics and Informatics*, issue 2, vol. 5, 2011.
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  - "Advanced e-Government Information Service Bus (eGov-Bus)", *Proc. of the 9th International Conference on Informatics in Economy*, May 5-7, 2009, Bucharest, Romania,
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