

## HIGHLIGHTS FROM COUNTRY REPORTS

### Day 2

Chair: Larry Caffrey

ICA Treasurer

UK

Welcome to the second session of the Country Reports. Today we have something slightly different. We have two short presentations from our host country Cyprus. These will provide examples of the way in which Cyprus is tackling the its approach to e-government.

First we have Rena Kouppa, who will talk to you about Taxisnet and then we hear from Nota Toomazou who will describe the Theseas project.

**Rena Kouppa, Cyprus.** A warm welcome to Cyprus, I hope you are enjoying the conference, and you are enjoying your stay in Cyprus. I am Rena Kouppa, the Project Manager of Taxisnet.

Our government promises to develop web-based systems to facilitate and give better service to the citizen. Taxisnet is one of these systems. What is Taxisnet? Taxisnet is an electronic submission of returns for income tax revenue department, and for VAT services. The objectives of Taxisnet was to develop a system that will give the citizen the facility to be able to submit income tax return for individuals, companies, partnerships or the employers the analysis for our employees. For Value Added Tax service: they could submit VAT form, the capital statements for these, and return for arrivals and departures for interest.

Benefits of Taxisnet. By implementing this we achieve to give the citizen great service. I do not know in your countries, Cyprus: people wait until the last day to submit their tax return! So, 30<sup>th</sup> April, the last day you could see long queues in different district offices to wait to give in their form. Now, this year we gave them the chance to submit electronically. You might say, can you, do you believe that people that they don't even take the post to send their return to send it by e-mail, through internet? We believe that we should be able to test their people that our system is reliable and secure, and that they will be able to send their return any day, any time, even midnight they can press the key and just send it.

Is serving, implementing the Taxisnet we save production time not only on the citizens but for the government employees as well, because their citizen goes to the income tax revenue department, that means the employee there has to flick through and see whether is correct, is filled in correct and all that. This is done by the system now. And believe me, the other day I was told by a girl from the helpdesk that she had a phone call saying "Oh I am trying to fill in the form on the internet and they do not allow me to put my wife's income, I am married. The girl checked, but in our database was single. He did not inform the system that he married. So all these checks were done by the system. And that will help us to improve and have a better database – an up-to-date database. Having their forms submitted electronically we shall save time and be able to handle more returns in a shorter time, because we shall not have to type data entry or the data from their returns. Now we have a pool of girls

that take their returns and they enter it in the computer. So we shall save money from that as well.

Designing goals. In designing the system, we had in mind to design the electronic form, as exact image of the well-known corresponding paper forms so that people entering the system could be in front of the forms that they were already familiar with, and nothing new. We tried to keep the same business rules and regulations that were well known to the taxpayers. Implementing the system we wanted every single taxpayer, sitting at home or in the office and having a PC in front of them connected to the internet to be able to use the system and submit his or her return, independently of the web browser he had. Whether it was Explorer, Netscape, Morvilla, etc.

As you see in the diagram, there are two types of interfaces of the Taxisnet system. Interface with the outside world works in two ways: HTML forms that the citizen fills in and submit their return. XML files that can be produced by any company or any third application through which more than one return can be submitted simultaneously. There are several security layers between the internet user in the system, we shall see them later in the presentation. There is no online communication of the Taxisnet system with the back-end system of income tax or VAT. Communication is synchronised with physical connections using XML files. There are already computer systems of income tax and VAT send details of the register Taxisnet users to the Taxisnet system as well as answering messages related to submitted returns. From Taxisnet system, information such as the date of submitted returns or declarations are sent back to the back-end systems.

XML technology. Well, I'm not here to give you a lecture on XML technology, I just want to emphasise that the system is using the XML technology that gives us communication regardless of the platforms and technologies used for each independent system. Phrased more simply, it is like having a single 'omni-translator' that can work between various nations and cultures, seamlessly. As well as you all know, XML stands for Expendable Map Language, and it grew organically from the need to improve fractionality of the work technologies through the use of a more flexible, and adaptable means try to identify information. The most flexible and simultaneously way of defining the contents of an XML file is the XML schemer. So, for every type of XML file that Taxisnet receives or sends, an XML schemer is defined. These XML schemer defines their rules, the corresponding XML data file will follow. The processing of XML is quite simple. The user logs in, and uploads an XML file. First, XML schemer validation takes place that checks that it is a valid XML file. Then the business routes validation follow, that is validation that the file contains valid data, and then processing results are published to the user. That is, gives their user a feedback of, for example, whether all the returns containing the file were processed or just 8 out of 10, because of some problem.

Well, after the batch processing, then the rest is similar to the processing of a single form. An XML file may contain multiple declarations of the same type. It can only have returns for individuals, employees or self-employed, returns for companies or for VAT, but not altogether.

Well, as web-based applications continue to gain their importance, it becomes increasingly necessary to host these applications on a flexible platform that provides scalability, reliability and availability: words that we have heard so much these days.

Clustering technologies can satisfy these needs today providing a solid infrastructure on which to deploy demanding web applications with confidence, satisfying the most exacting customer demands. As you see in the diagram, our solution offers high availability as each server operates independently. We have two load balances for the two web services. In the management segment we have two servers: one who manages the firewall, and the other the manager's backup. There are two database servers and two application servers. We are using Windows server 2003 standard edition, and Windows server 2003 enterprise edition. We have SQL server enterprise edition and on the application server, IBM web sierra application server that networks deployment, the version 5.02. And on the web server Microsoft IAS.

Taxisnet is a web system, and as you can see, it has been developed using many tiers, including the presentation and access here, the database here, and the middle one, the business tier, which includes the technologies that handle the business logic of the system. The Java to enterprise edition platform that has been used gives the technologies and the environment that helps to develop tax type of multi-level complicated systems that is using less cost as much as possible and the complexity of the development. Java 2 Enterprise edition gives the benefit of simple architecture, simple development of software, and right ones run anywhere. The software can be developed with a variety of tools, and the most important can function in a variety of application servers. Simple scaling in more than one machine, scalability for better distribution of workload.

Security: if not the most one of the most important features of the system. There are two firewalls as well as ACL on the switch of GDN. GDN is our government Internet network; it is the network that connects all the government departments for the business of Taxes. Also, the external users have access to the web-server only through to the end proxy that provides additional security. So at network level, we have the firewalls for intruder detection, then at the communication level we have acquired the SSL certificate for critical data. Then application level we have user name and password. We give the user, user code and password, to the users that they have registered to be Taxisnet users, and we urge them to modify them frequently. One user, once he gets his user code and password, the first time he logs on the system has to modify at least one of them. Access is given to the users only to the functions they have registered and are authorised to use. For example, I am a government employee and I have become a Taxisnet user, I can only submit my return. Individual employee's return. I cannot fill in a return for company or for partnership. Not even for VAT.

VAT and income tax database are two different databases, and if somebody wants to be a user for both system, they have to register for both.

Implementation. The kick-off meeting for this project was soon after Christmas holidays, early January, and the deadline to submit individual returns was 30<sup>th</sup> April 2004, so that means returns for 2003. As you understand, in a very short time, we had to do a lot. We managed to have the system up and running on 6<sup>th</sup> April 2004 for citizens to submit their returns. That was phase one for I.R.1 for employees and certain employees to be able to submit their returns. Phase 2 implementation of the project concerned implementation of the rest of the income tax forms, that is income tax returns for partnerships, companies and employers. Also they include the VAT form as well as their statement for VIES, and the returns for arrivals and despatches

for INTRASTAT. The application has been completed according to the user's requirements and we are planning to go live by the end of this month.

So, Taxisnet is a web-based service, developed and deployed on behalf of the department of information technology services of the Ministry of Finance of the Republic of Cyprus for the electronic submission of tax returns for Inland Revenue department and returns for VAT service. More information about the system can be found in the address [Taxisnet.mof.gov.cy](http://Taxisnet.mof.gov.cy).

Concluding, I just want to say that Taxisnet system is a successful bridging of modern web-based applications with traditional transactional environment. I just want to now show you an advertisement for Taxisnet. Well, I suppose it is all-Greek to you! But that advertisement was prepared by the Inland Revenue department and was on TV during April 2004. It shows all the paper, the long queues that exist now, and then just by pressing a button, and drinking his beer by his swimming pool he could submit his income tax return as well. Thank you.

**Larry Caffrey, ICA** Thank you, Rena, for a very interesting talk. I would now like to ask Nota Toomazou to take the podium. She is the Operational Manager of Theseas. Obviously quite an heroic task.

**Nota Toomazou, Cyprus.** Is not the only task we have.....Good afternoon Ladies and Gentlemen. I will give you a quick overview of the Theseus project, which is the computerised system of the Cyprus Customs & Excise department. We will see, Theseas overview - the objectives, the critical success factors, why Theseas? The Theseas topology, the benefits of Theseas and the post-implementation experience.

Theseas overview. THESEAS is the first e-government application in Cyprus, a fully integrated web enabled Customs Information System and inline with EU requirements. It delivers to the Trade the services needed to handle its formalities related to Customs Procedures, provides interoperability with the Systems of DG TAXUD, and the Cyprus Ports Authority. It also provides External Interfaces to other Government Departments, e.g VAT and Statistics. We usually name our project with the first characters of each description. Accordingly, this project should have been called CIS, or something like that, Customs Information System but instead we named it Theseas. Why? Because Theseas, according to the Greek mythology was the son of an Athenian king who managed to kill the Minotaur, a monster with a bull's head and a human body that eat human flesh and used to live in a labyrinth. The aim of the first system is to kill the Minotaur which is hidden in the labyrinth of democracy! We are very optimistic!

Objectives: to support a number of administrative reform, and trade facilitation components within the Customs & Excise department. Aim at modernising the department, improving efficiency of operations, enforcing legislation, strengthening of internal controls and simplifying official formalities and documentation. We had also to support taxation of Cyprus to the EU by the use of information systems.

The Critical success Factors: quality of information. Before Theseas, there was no computerised system to support the Customs department, and as you can understand, there was no information available on time, not to mention quality. Now, the computerisation, accurate information is available.

Speed and Availability of Services. The turnaround time of clearance of goods has reduced tremendously. In the past, at least 24 hours were needed to clear goods. Now the time needed has been reduced to between half an hour to 2 hours. A simple example. Once the manifest has been submitted by the carrier and the plane has arrived, the clearing agent or importer can submit their declaration. Once submitted, Theseas validates their data against the tariff that carry the bonded warehouse accounting and passes to the intelligent module in order to produce the risk analysis result. Customs can intervene to their results if the goods have not been blocked and they would like to block it. If goods are blocked, then they follow the examination procedures. If goods are freed, and there is no liability, the importer can just take the goods and leave.

Availability of Services. Theseus provides a 24-hour support service to the public except for one and a half hours during the night for back-up maintenance and housekeeping purposes.

Management Information. With the computerisation, accurate information is available when needed, either as standard report enquiries or adhoc.

Intercommunication and Operability. As I mentioned before, it provides interoperability with the system of DG TAXUD, for example, tariff and the Cyprus Ports Authority. But I would like to mention that a standard XML development has been made available to the traders for live input but also to give the opportunity to the traders to utilise their existing computerised system. As Costis Toregas mentioned yesterday, we don't have just to develop a new government system but we have to provide services to the citizen.

Flexibility. The system is mostly parameterised and easy to maintain.

Harmonisation with EU Systems. It is in line with the EU practice.

Another critical factor, success factor we had to meet which I did not include in the presentation was the fact that we had to meet the 1<sup>st</sup> May 2004 deadline, an immovable deadline; due to our joining the EU.

The scope of the project covers the following operating modules: goods processing, intelligence, revenue and accounting, management information systems and of course, external interfaces. I would like here to mention that Theseas website is not only used for the logging in of the users but it provides help and support to its users. We published new circulars, user manuals, new codes, contact persons and is used as a notice board as well.

Key Feature of Theseas: intelligence. Acts as an enabler of more accurate targeting. Maintains old data on risk management. Allows cross matching and linking of data on suspect consignments and persons.

Revenue Collection: provides an extended range of payments options, deferred payments, cash payments.

Goods operations: uses link to intelligent system to select goods for examination. Enables quicker processing through Internet.

Audit: provides for post-clearance audit. Utilises mobile technology.

Client service: maintains client information on database. Enables pro-active client service through analysis of strength and identification of need. Provides a centralised interaction with clients.

Why Theseas? Simple. Single point of access. Basic knowledge of Theseas web skills are needed. Procedures in line with EU best practice. Easy to use electronic customs declarations and payment. Secure. Combination of firewall operating system, user ID password and encryption. Fast and reliable, I must add. Faster processing and turn-around time of clearing, as we have mentioned before. Cost effective. No special technical investment, just a standard PC with Windows and the web browser. And Internet of course is more cost effective than manual pay per delivery. Again, I have to mention Costis Toregas saying equity: government is for everybody. User friendly: standard Windows interface. Improved dialogue through online comments, help-desk and operational support facilities. Remember, here is the pain. We have to do that.

The Approach to Development: we adapted a supplier's import declaration system. We used a proven package solution for tariff and manifest. For their accounting bonded warehouses and national tables, we had a bespoke development.

Theseas Topology. The external users, through the government internet note and the Theseus firewall can connect to their system. The remote user, which is Customs user, through the government data network and Theseas firewall, can connect to the system. Custom officers, through Theseas firewall and CSI gateway, planning interchange data with the euro domain.

Theseus Hardware outlook. This is the outlook of our computer centre. As you can see, all users pass through the firewall and through the web tier, no user is allowed to access the servers directly. We have two servers in high availability mode, we have the tariff and the tariff server, we have the authentication server, and we have the CISCO web server, the asset-frame and the business object server. On the right, you can see the CCN/CSI gateway and the server of the new computerised transit system. And we have 16 remote locations of Customs officers. This is a typical remote site outlook with the difference that we used fibre-optics in the warehouses buildings as they were far away.

Benefits of Theseus. Effective delivery through Internet. Minimise cost of customs clearance. Improved border protection with minimum intervention to legitimate trade. Support economic growth. Enables change in the traditional role of Customs. 24-hour service, modernised procedures in line with EU requirements. Post-implementation experience: risk in using evolving versus proven technology. Value for integrating technical and business process change. Clean and simple project management structure. Visible commitment for senior management. And finally, the mixture of anti-climax and pride, after the implementation of the project. Thank you.

**Larry Caffrey, ICA** Thank you very much. If we spend just a minute, does anyone have any questions, are there any questions here please.

**Jacob Narvot, Israel.** I just want to raise a question to concerning us all in what has been said about Theseas system. There is a tendency of coping when moving or transforming a form, and government has got a lot of forms into the Internet. We tend to copy the form exactly and put it on the Internet, and I am asking is it wise who have so we can do other things, other sophisticated things rather than copying the exact form with the same colour, etc, into our machines. I ask the question to both of you. And to other countries here.

**Rena Kouppa, Cyprus.** Yes, I would like to comment. Was your question that we usually use the existing forms and procedures for deploying a government project?

**Jacob Narvot, Israel.** No, my question was addressed to this form that we copy the exact form and we don't do something else.

**Rena Kouppa, Cyprus.** So that is why I said at the end the post implementation experience, we found value of integrating technical and business process change. I mean, without business and engineering I think information systems will fail.

**Sean Connely, Ireland.** Just to make the comment that the, going on to the Internet does give you the opportunity to simplify and present a much easier form, that is what we actually did. So, from a taxpayer's point of view, you only need to answer those questions that are relevant. So the form for the ordinary person is much simpler, much easier to fill in. The second this is you get instant feedback. So I think most countries are re-designing to exploit this wonderful new opportunity.

**Arja Terho, Finland.** I have a question to both of you, and especially about the taxation system. You said that you register the users somehow, so how do they get your passwords and in-codes, how do they register through the systems, and then for the Customs systems, I am interested in how do you authenticate the companies? Because we find that very difficult. Who has the credentials in the company to do the business?

**Rena Kouppa, Cyprus.** They have to register. An electronic signature is not recognised in Cyprus yet so in order to become Taxisnet users they have to go to the office of Income Tax, fill in a form and sign it themselves. Then they become Taxisnet users. There are user code and password are sent to them through the email they give on their paper they filled in.

**Nota Toomazou, Cyprus.** As far as Customs is concerned, we have applied legislation for their business registry. And each applicant has to download the application form from the Internet, or to go to the Customs department to fill in the form and sign it. There is a group at the Customs' offices, that checks their credentials of the form, and then they have to come back in person to sign the form and get their user ID and password. And also for the Customs system, we have also the approved register. Not every clearing agent can clear goods for any importer: he has to be authorised by the importer to clear the goods for the specific importer.

**Lars Karlsson, Sweden.** Thank you. Answering to your question on, do we just put our forms online? What we did was at the same time, both simplify, especially the tax code for private individuals to remove a number of specialised clauses to make it more simple. We utilised the use of information that was already available for the public sector in electronic form. For example, employers had to report every month on the basis for employer contributions to the social security. So the public sector already had information on all wages paid out to individuals. We had information from the social security systems on tax about benefits paid up. In fact, by simplifying the system and by combining it with information that was already available, we can now provide two-thirds of the Swedish taxpayers with a statement saying: this is what we know about your revenues, if it is correct please signal to us by telephone/internet/SMS message or whatever means that it is okay. And that is it, we are finished with you! So I think these are the two aspects which we can do to simplify it.

Second, reflection with is not done in Sweden yet but which we have seen as an opportunity is to use the more multi-dimensional character of an Internet to design the interface with the user in a more friendly way. Basically, we have very compact forms because we want to put it all on a single A4 paper and not have to have several different things. But if you make it on the Internet you can design the interactivity through questions – just skips parts of forms which is not relevant to you in your specific situation. So you should/could do more. We have not introduced that opportunity yet, let me add that.

**Rena Kouppa, Cyprus.** I would like to make a comment on that as well. I said that we have used the exact forms that the citizens were familiar to. But before, because we had in mind to computerise it, we simplified the forms so that the user got used to the idea, got used to the form and then we put them on the internet. We thought that it was easier for them. If it was totally new to them they might not respond as much as if it was something new.

**Larry Caffrey, ICA.** Okay, yes. We are going to move on now. If you have any further questions by all means make them later tonight or send her an email. So long as it isn't rejected by Spam!