RISER: CHALLENGES OF A TRANS-EUROPEAN ACCESS TO RESIDENT Registers

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The Registry Information Service on European Residents (RISER) offers access to official address information in different EU Member States. Thus RISER makes available one of the most frequented services of the public administration in a Trans-European scope. Today companies and citizens who want to gather information from a foreign civil registration office face a complex situation of responsibilities, idiosyncratic requirements and language barriers. RISER will change this by setting-up a central web-service for collecting inquiries, distributing them to the responsible authorities and delivering the results to the customer. RISER uses secure Internet infrastructure based on open standards and complies with national privacy and data protection requirements.

Introduction

To run a business successfully a good relationship to the customer is essential. But do you really know your customer? Are you billing the correct address? Lost invoices can cost companies large amounts in lost revenues. Current methods for address validation are manual and costly and in some cases non-existent. The most common and secure way to verify address information of customers is to inquire into public registers. On the national level these kinds of inquiries are one of the most frequented services of public administration. Recent studies indicate that the markets for Germany and Austria receive approximately 27 million and 950,000 inquiries respectively from companies and citizens into official registers per year. With an increasing linking-up of economies in the European Single Market the demand on pan-European inquiries for address validation is growing. The Registry Information Service on European Residents (RISER) [1] will meet this demand and provide official address information for companies and citizens within a Trans-European scope.

Currently address information can be gathered in the different EU-Member States at national or local level only. The conditions to access these official registers are stipulated by national jurisdiction. Thus companies and citizens who want to gather information from a foreign civil registration office face a complex situation of responsibilities, idiosyncratic requirements and language barriers. RISER will change this by setting-up a central web-service for collecting inquiries, distributing them to the responsible authorities and delivering the results to the customer (see Figure 1). This makes RISER unique. It provides easier access to public registers via secure Internet, speeds-up the processes and makes the information of the registers available in different Member-States. Compared with existing eGovernment services offering access to local or regional civil registration databases RISER provides a broader coverage. In the long run customers using RISER will be able to reach every authority within the Member States that are connected to the RISER-Network. Currently Germany, Austria,

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Ireland and Poland are participating in the RISER-Network. The pilot-trials between Austria and Germany commenced in late 2004. To reach these ambitious objectives the main RISER challenge is to provide an organisational, technical and – most importantly – semantic Interoperability throughout Europe.

**Figure 1: Basic Concept of RISER**

**Evolvement of the project idea**

The inspiration for RISER emerged at a local level. PSI AG, a leading software provider and the Berlin authority for civil registration (Landeseinwohneramt Berlin) jointly developed a registry information service for the state of Berlin. This platform started in December 2003 and offers access to 3.4 million residents [2]. Taking the potential of the European Single Market into account, the feasibility of a registry information service with a European scope was reviewed. As Germany has the most complex structure in civil registration compared to other European countries, the Berlin platform already covered the main technical and organisational challenges of a Pan-European RISER service.

In 2003 an international consortium comprising companies, research establishments and authorities from Germany, Austria, Poland and Ireland proposed the RISER service in the eTEN-Programme. This cost-sharing Programme aims to increase the number of Trans-European eServices. The European Commission accepted the proposal for a market validation of the RISER service and the project started in March 2004. Following the conclusion of market analysis, pilot-trials have commenced between Germany and Austria in September 2004. The pilot-trials will be evaluated so that the performance of the RISER service can be adopted closer to the needs of customers and suppliers. The initial deployment of the service is scheduled to start in Q3 2005.
Architecture of the service

The central idea of RISER is to be a junction between customers and suppliers of official address information. On the customer-side, RISER offers unified access whereby the company or citizen can put orders for different authorities in the Member States. RISER shields the intricacies of different local services (e.g. language, payment procedures, idiosyncratic requirements on data provided by the customer etc.) from the customer. On the supplier-side, RISER gathers the required data by ordering them from the appropriate authorities in the EU Member States. The relationships with suppliers are complex and heterogeneous and RISER has to work with pre-existing conditions. In the course of the advance of standardised interfaces, RISER will increasingly make use of opportunities to connect suppliers online.

Nearly all EU Member States’ local or regional authorities keep civil registries on their residents. Therefore the RISER consortium represents the most different structures for civil registration in Europe. With more than 6,000 local authorities responsible for civil registration, the German situation is the most complex one in Europe. Here several private or public portals are emerging on the state level providing official address information for their “Bundesland” (e.g. d-NRW for North Rhine-Westphalia, ZEMA for Bavaria, Hamburg Gateway etc.). These portals are mostly stand-alone and are not connected to portals in other states. Because of their limited scope, RISER is the only eGovernment-Service on the German Market with a Trans-European focus. Nevertheless the state portals are important partners for RISER because they can be used as intermediaries. Co-operation between RISER and the state portals provides a Win/Win-scenario for both sides.

Austria and Poland keep national registers on civil registration. On the organisational level this makes the implementation of the RISER service in these countries quite easy. Both databases are run by the Ministry of Interior and can be accessed by a central department providing official address information. For Austria the existing technical framework of the Zentrales Melderegister (ZMR) is highly advanced and therefore favourable to connect the RISER service [3]. Companies who are looking for access to the ZMR have to apply for permission with the Ministry of Interior. In Poland the inquiry into the PESEL register has to include a justified legal interest why the data is requested. Furthermore the person whose address is subject to the inquiry has to agree to provision of the data.

In Ireland RISER cannot use the currently existing structures in civil registration. Here RISER will have to gather the necessary data from other sources like the Public Service Broker (PSB) that is currently in development [4]. In January 2005 RISER connected to the Irish Electoral Register as an alternative source of official address information in order to be able to offer address verification with addresses of citizens who are registered to vote in Ireland [5]. The analysis of the registration processes in all EU-Member States showed three main groups. The first group includes countries like Germany, Austria, Denmark or Sweden where adequate registration processes are available and the access for private entities is allowed. The second group comprises Member States like Poland, Netherlands, Estonia, Spain and Portugal where adequate registration processes are available but the access to the registers is legally restricted. Ireland, Great Britain and France belong to the third group where other sources of address data have to be evaluated.
RISER business potential

Even if the technical basis for the RISER service already existed, the most important reason to face the challenge of a Trans-European eGovernment service was the excellent business potential. With the enlargement of the European Union the number of residents in the Single Market has been increased to circa 450 million. In this growing market, including 25 different states, the maintenance of customer relationships is even more complex.

From the business case perspective of RISER this means that a significant amount of standardised inquiries have to be distributed to a complex number of data suppliers using different legal, organisational and technical requirements. The business model of the service is tailored to these conditions. RISER will be financed by a transaction based billing model. The customer pays a fee per inquiry, which includes the administrative charges as well as the operative cost of RISER (RISER fee + obligatory administration fee [6] = customers fee). In any case the administration fee will just be passed on from the customer to the public authority where the request was made by the RISER service.

The main customers for the RISER service consist of two groups: commercial and non-commercial. Commercial customers whose core business is not directly based on address information such as lawyers, insurance companies, banks, credit lending agencies, eCommerce providers, and specialised service providers whose core business it is to establish and verify addresses. This is the group of the so called “power users” of the registry information service. The non-commercial customers are mainly citizens searching for people when they lost contact with them [7]. RISER provides convincing economic benefits to both these customer-groups:

- uniform and easy-to-use access to the service in different languages
- faster processing of the required data than the traditional paper based processing
- less effort to fill in or file the electronic form
- improved quality of public service

The following table shows the annual amount of inquiries from commercial and non-commercial customers:

<table>
<thead>
<tr>
<th>Member State</th>
<th>Number of inquiries per year</th>
<th>Transaction compared to residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>27.400.000</td>
<td>0,30</td>
</tr>
<tr>
<td>Austria</td>
<td>950.000</td>
<td>0,12</td>
</tr>
<tr>
<td>Poland</td>
<td>400.000</td>
<td>0,01</td>
</tr>
</tbody>
</table>

Table 1: Inquiries for address validation from private customers into official registers [8]

But not only customers can benefit from the RISER service. National authorities running their respective residential registers will also benefit from participation in the RISER network. The registers will be accessible to the public according to national and European legal restrictions. For public authorities this is an important point because the operation costs for providing resident registers with limited accessibility exceed the public revenues. The participation of public authorities in the RISER network will increase the number of inquiries into the residential registers and improve their cost structure of the service. A third group of RISER users are operators of local, regional or national information services, city portals etc. By connecting these services to the RISER network their users will be able to inquire about
resident information in other European countries. This is an additional benefit to the European users that the service can provide to the market.

It is to be expected that the availability of an economical and fast Trans-European information service such as RISER will attract further groups of customers and additional business scenarios. EBusiness companies in particular who wish to establish safe and cross-border customers relationships via Internet could verify new client data by using RISER with minimal or no interruption in the vending process. Mobile application could be used for age validation of customers using services or ordering goods for adults. This would be possible as the inquiry results contain the birth date of the person the data have been requested from.

Trans-European address validation – a case study

A short case study illustrates the benefits of the RISER service. The starting point is Vienna. An Austrian mail order company had received an order from a German customer to deliver three cases of Austrian wine. When the company delivers the wine to the German address three scenarios can happen - not considering the best case where the customer receives the wine, likes it and continues to order in the future. (1) The delivery address in Germany is incorrect or does not exist. (2) The wine has been delivered but the customer disappeared before paying the invoice. (3) After a successful business contact, the relationship with the customer broke down because he relocated.

In the first scenario the company has to bear the costs for the returned order. A check of the delivery address in Germany by using RISER would have shown that there is nobody registered who matches to the address. The company would have stopped the order. The second scenario is even worse for the mail order company. Now the customer does not know how to get in touch with the customer and would normally involve an agency specialised on receivable management with foreign countries. This is a costly venture as the agency has to contact a German partner who searches for the debtor. The access to address information of customers is a critical matter in any business. Nowadays an average of 20% of address information stored in the data banks of companies is incorrect. The third scenario leads to returned mailing and loss of communication with the customer.

Looking for the correct address of the customer the company joins the RISER Web portal on www.riser.eu.com and submits a request. According to the German law the Austrian company can request data of the customer from the responsible authorities (via the Internet). The person searched for has to be specified by first and surname, the city or postal code (to find the responsible authority) and at least two additional pieces of information out of the set of personal data stored of each resident in the register (date of birth, sex, street and house number). If the person has been unambiguously identified in the register, the company will get back a validate and complete address for its customer including first and surname, date of birth, sex, street, house number, city and postal code.

By using the RISER service the Austrian company has the possibility to make a quick and easy search for the customer. RISER would guide through the service to request the address information correctly and would notify of the arrival of the results via e-mail or SMS. With RISER the mail order company can avoid the three costly cases.
Technical description

The technical basis for the RISER services is a platform for the exchange of various kinds of information between external systems residing in different domains. It is particularly designed to meet the special demands imposed by transport of official information. This platform will commence operation in mid 2004 and will prototypically provide public registry related data from authorities located in Germany and Austria. It is designed to serve both automated access by computer systems as well as for single inquiries initiated by individuals.

The RISER system is constructed as a combination of largely independent components thus can be easily extended or maintained. The most important modules are shown in figure 2 below. The central component is the RISER routing service. It separates enquiry orders into packages, routes these packages to different registry authorities, collects the inquiry results and reassembles them according to the original orders. Data-Centre adaptors take care of the proper connections to various computer systems of authorities. They have to undertake all technical, syntactical and semantical conversion that is needed to transfer requests and replies to and from the external systems. A directory service is needed to locate the authority responsible for address inquiries regarding specific geographical places. It supplies addresses and interface standards for the exchange of electronic data as well as rules for data conversion. An accounting service provides all data needed for invoicing and paying for data supplied. The purpose of a user portal is to provide means for all interactive accesses by customers and suppliers for placing orders and administering their data. The OSCI intermediary is an essential part of OSCI technology [9] and will be used for secure communications where the parties involved are able to use this standard.

![Figure 2: Overall structure of the RISER service](image)

Figure 3 below shows the technical architecture of the RISER system. All individually implemented parts of the RISER application are built using Java as the programming language and utilizing Java 2 Enterprise Edition (J2EE) as the architectural framework. This guarantees a high level of transportability and independence of proprietary platforms as well as standard adherence and as a result protection of the investment. On top of that, the system uses mature Internet technologies (SOAP, HTTP) that are widely adopted and also have been shown to work successfully in many business and administrative contexts. Data is stored in a
relational database utilizing SQL as the data access language. The application does not depend on a specific database product. Open source products will be used as the web middleware and database systems. But since implementation adheres to standardised interfaces, this is not essential for the application.

The OSCI standard for data transmission is very important as the fundamental means for data communication via the Internet. OSCI comprises of a family of protocols for the secure exchange of messages to enable interoperability between different IT-systems and to achieve legally binding transactions. It is built on state-of-the-art architecture based on XML/SOAP including electronic signature and encryption (e.g. Web-Services). It separates payload and transport data and therefore allows classification according to data privacy laws.

![Diagram of the RISER service technical architecture](image)

Figure 3: Technical architecture of the RISER service

The interfaces for exchanging resident’s data (which make up the payload of all RISER messaging) will be based on OSCI-XMeld. This XML-based open standard is mandatory for German eGovernment applications that exchange public registry data. For RISER, XMeld serves as an example, because the interfaces defined by this standard will certainly have to be extended to accommodate country specific name and address data.

Regarding the interoperability of data within the civil registration in Germany the XMeld standard emerged in the last years. Geared to this XML based standard the transport of personal data over the Internet will be developed by RISER. But with regard to the organisational and semantic interoperability of trans-national eGovernment services, a number of questions are not yet answered. RISER addresses these issues and represents an archetype for the development of Trans-European information services. These efforts conform also to the guidelines of the European Interoperability Framework (EIF).
Privacy and data security

It is of the highest priority for RISER to conform to data security requirements and to protect the data from unauthorised access. This was also the basic condition for the acceptance of the European Commission. Therefore, RISER will conform to the different legal regulations on data and privacy protection in the Member States as well as to the European directives (94/46/EC and 2002/58/EC). This is ensured by the involvement of the Independent Centre for Data Security Schleswig-Holstein. Hence, RISER does not intend to substitute existing public registers or build up its own database of personal data.

To prevent unauthorized access to the personal data processed by RISER the system will be geared to the German OSCI-Transport standard for data transfer. The OSCI-Transport standard is already applied in various eGovernment contexts in Germany for services in civil registration. OSCI will be also a substantial component of eLINK, the European standard for safe data exchange between public administrations, developed within the EU Commission's IDA programme. By accounting for the achievements of these activities, RISER will promote the development of secure cross-border exchange of sensitive personal data within Europe.

Conclusion

RISER is an excellent example of ambitious eGovernment services with a Trans-European scope. Next to an attractive business potential, the set-up of the RISER service implies important organisational, technical and semantical challenges. It will be also important to meet these challenges for the development of further Trans-European eGovernment services. In the first phase of the market validation, the RISER service will set-up pilot trials between Germany, Austria and Ireland. In the execution of these pilot trials customers and civil registration authorities are invited to co-operate with the RISER consortium. In further stages the service will expand to other EU-Member States. This will increase service functionality, as even more resident registers will be accessible.

References

[1] For further information see http://www.riser.eu.com
[2] The Berlin platform is used mainly by state authorities like police or courts. In December 2003 the first private user BVG (Public Transport Berlin) got access to the platform submitting 85,000 inquiries per year. When the state law on civil registration will be passed in the end of 2004 it will be allowed for other private users to use the Berlin platform.
[4] The PBS project will attempt to centralise access to all Irish government service though a single portal that will be supported by a Public Service Identity (PSI) data set.
[5] The Registers of Electors in Ireland are maintained by local authorities using “eReg” software. The registers can be asked about the voting status of some identified citizen online without restrictions.
[6] The administration fee is stipulated by the authorities. For Germany it averages about 4 EUR and in Austria 3 EUR for inquiries from private entities.
[7] The inquiries made by public authorities like police can not be included into the business case because the access to the registers is free of charge for this group.
[8] Numbers taken from the results of the market analysis executed by the RISER consortium.