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Government eLink
Generic Services for eGovernment and IDA
Application Services
(Sweden)

For information



Swedish Agency for
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Government eLink

Generic Services for eGovernment and IDA Application Services





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Draft proposal for IDA/Government online

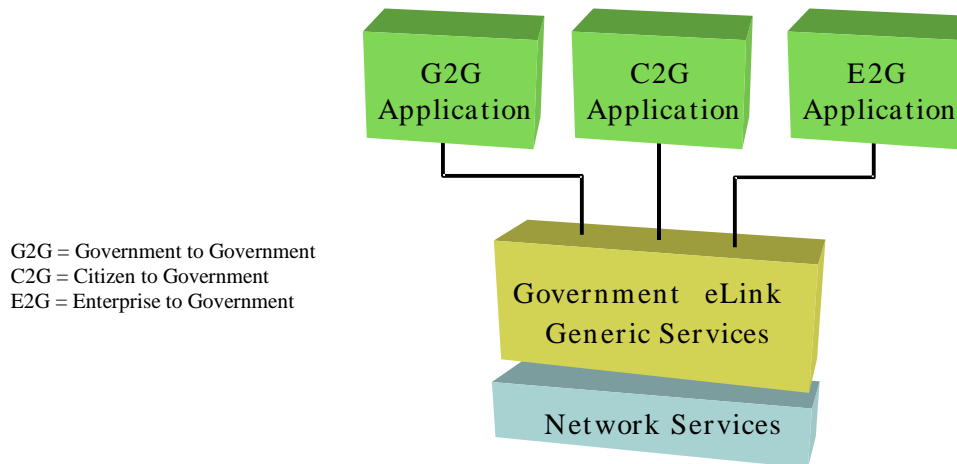
• Proposal

We would like to propose the following:

1. Government eLink should be used by IDA as a set of Generic Services to develop Government e-services that interact with citizens and enterprises. This will make it easier for them to get in contact with concerned Governments in EU Member States and to get access to public information.
2. Government eLink should also be used by IDA as a set of Generic Services to develop application services between administrations in different Member States, which will improve the electronic exchange of information between institutions, and increase efficiency.
3. Government eLink should be used by IDA to provide value-added services on top of TESTA II network services. This will reduce development and maintenance costs for IDA application services, and promote the use of an open source software in the public sector as a platform for integrated electronic services in the Member States.
4. The Swedish Government is prepared to make the Government eLink services available to IDA to be used for the Community
5. The current Government eLink specifications should be revised to satisfy the European interests. This can be done as a work item within the IDA programme with contributions from the Swedish Government eLink team. This work could start late autumn 2000 and result in a Generic Service.



Government eLink Generic Services



Government eLink is a set of generic services used by government agencies and other administrations in Sweden to develop eGovernment services to citizens and enterprises. The Government eLink solution facilitates also efficient and secure communication between administrations.

The solution comprises a framework of generic services, service directories, open standards and use a PKI security platform. The generic services are used to develop application services serving citizens, enterprises and case workers within government agencies and local authorities in Sweden.

- **One-Stop-Services**

Applications within each administration can be linked via the Government eLink to implement logical networks of interrelated applications for complete business processes that spans more than one administration. This makes it possible to provide 'one-stop-services' for citizens and enterprises.

These business processes are customer focused and are induced by life events of individuals or business events of enterprises.

- **IDA application services**

Government eLink can scale to provide similar IDA application services that involves several administrations in different Member States to support the four freedoms within the European community. Examples are social security benefits such as old-age pension when moving between different Member States and VAT reporting when goods cross national borders.

A citizen or an enterprise in one member state should only need to contact the appropriate administration in the country concerned in order to get the required service. The administration should then on behalf of the citizen or enterprise initiate electronic transactions with other administrations in the same country and or in other Member States. Government eLink makes this possible.



History

Government eLink, is a Swedish national set of generic services for exchange, dissemination and collection of data. The owner is the Swedish public authorities and it is administered, developed and maintained by a co-operation project, the Government eLink-project. The project is coordinated by the Swedish Agency for Administrative Development.

The Government eLink have been developed together by the Swedish Agency for Administrative Development, the Swedish National Tax Board and the Swedish National Insurance Board. The concept and standards are currently implemented, after a public procurement in form of services by two vendors, Frontec AB and Hewlett-Packard AB.

The concept

Government eLink is a set of generic services for information exchange primarily between authorities in the public sector, but also between Swedish citizens and the public sector, and Swedish enterprises and the public sector.

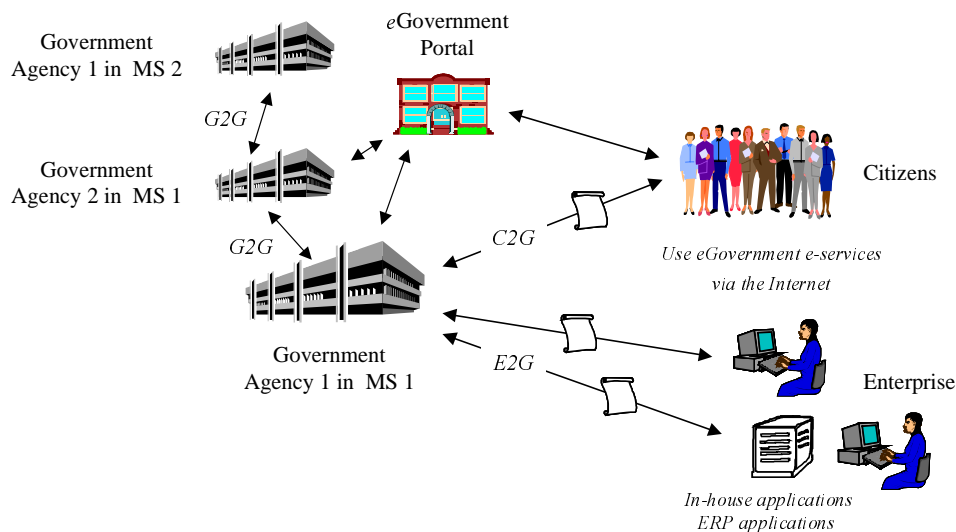
The primary focus for Government eLink is to provide generic services that enforces a high security and interoperability for information exchange in the public sector.

Government eLink defines three separate areas for electronic information exchange between administrations and the society.

1. Delivering personal and enterprise specific information with high demand on integrity and security to individuals and enterprises.
2. Receiving personal and enterprise specific information from individuals and enterprises with high demand on integrity and security.
3. Rationalisation and streamlining of business processes more, efficiency in clusters of organisations, forming a virtual government body, i.e. *eGovernment*.

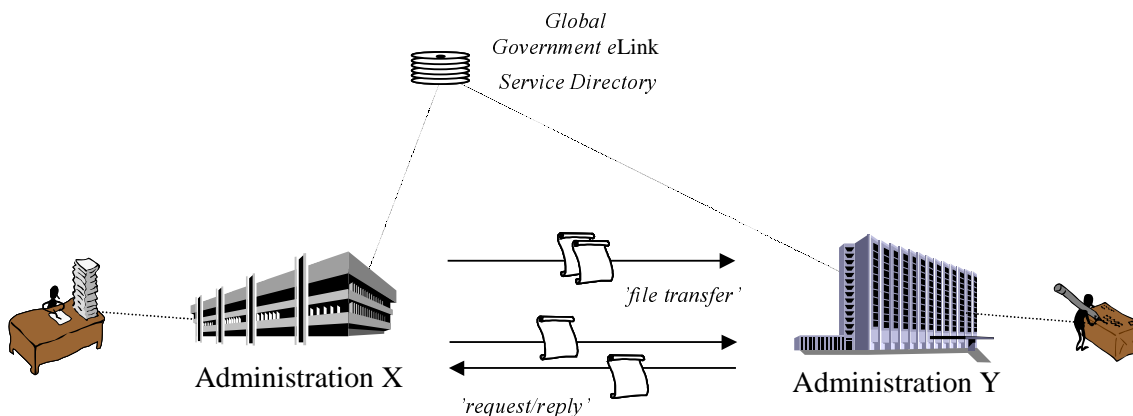
The first and the second area are services sorted by their character. Government eLink is a tool for the public authorities to ensure that citizens and enterprises have a two-way electronic access to information, which enable them to receive information and submit returns. An individual or an enterprise do not need to know which public agency they want to contact, only what service they want.

It should also be possible for a group of public authorities and/or third parties on the market to provide access to public sector e-services via one or more Portals on the web. It is thus possible to create one contact using the Government eLink infrastructure for enterprises and citizens to the 'smorgardsbord' of public services provided by the public sector.



The third area facilitates efficient information exchange between agencies in the public sector. Note that this a prerequisite for creating single point of contacts and efficient processes involving enterprises and individuals. Information about public sector e-services¹ is available in a global Government eLink service directory.

The two methods of communication between two agencies connected to Government eLink are file transfer and request/reply. File transfer is typically used when transferring larger amount of information and request/reply to handle queries typically involving smaller amount of information between agencies.



In a wider perspective Government eLink can be used by other Member States to handle the public sector information exchange within their respective country.

In an IDA context, Government eLink can be characterized as a generic service/common tool and technique, that can be used by a number of different agencies working under their unique conditions. Government eLink makes it possible for agencies to be partners and collaborators in a virtual network, and supports their transfer of data, even if it requires translation between formats. The catalogue functions in Government eLink can be used to build virtual bridges between the partners. Thus the Government eLink might be a very useful instrument to support eEurope Government On-line and IDA. The connectivity between

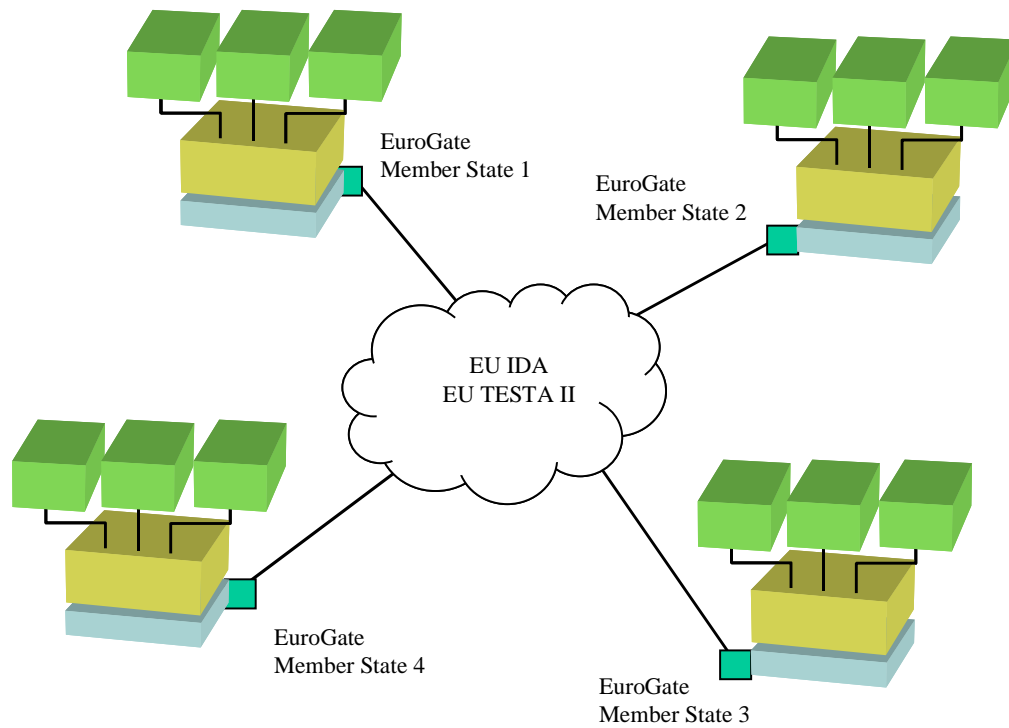
¹ In Government eLink terminology e-services are 'products' in the information exchange.



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citizens/enterprises and agencies in Europe is of particular interest as a tool in so called pan European application services. A possible future extension of Government eLink is thus to be used as a common tool for information exchange between member state agencies (+ citizens/enterprises) in different countries. The access can for instance be through the IDA/TESTA II EuroGates, making use of the TESTA II network for network services.





IDA Application Services

Currently Government eLink is used to exchange information between applications within the same administration (intra-administration) and between applications in different administrations (inter-administration). These applications use the generic services provided by the Government eLink framework, see next chapter.

The same services could be used to support information exchange between applications in administrations in different Member States, for instance pan-European application services or other IDA application services.

Pan-European application services are interconnected applications that implement processes to provide 'one-stop-service' to citizens and enterprises. These processes are typically triggered by life events of individuals and business events of enterprises.

In the future the need for these pan-European application services will increase due to increased citizen mobility between Member States and increased flow of goods, services and capital across national boundaries.

A framework of Generic Services

Government eLink comprises a number of generic services to support a secure exchange of information between applications in different administrations. The generic services provides file-transfers, synchronous message exchange, web access, temporary storage of information, systems management, encryption, decryption, electronic signatures, conversions between different message standards, workflow capabilities, logging of information exchange and service directories.

One of the fundamental design criteria of Government eLink was that it must be possible to develop loosely coupled inter-administration applications. This means that one application within one administration should require limited knowledge of the applications in other administrations it need to exchange information with. This means that each administration can develop their own applications using their own preferred tools and technology platform independently of each other.

The architecture, technique and security

Government eLink is designed to be clearly separated from the agency's internal applications. One application in one organisation that wishes to exchange information with another application in another organisation (or the same organisation) only needs minimal communications data in order to transfer information. An application only needs to know the Government eLink product in the information exchange and/or the identity of the receiving organisation.

The fundamental design principle of Government eLink that interacting applications should be loosely coupled means that it is possible to create virtual webs of information exchange without strong dependencies between participating applications that would create very brittle structures.

The information of Government eLink addresses, products and actors is available in the global Government eLink service directory. Furthermore, the information exchange between agencies in the public sector is



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based on bilateral agreements between the involved parties. It is not possible to exchange information without such an agreement. This ensures a highly structured flow of information in the public sector and also enables a high level of integrity.

Government eLink is a set of generic services, which separate the transport and security from the actual business information being transferred. This makes Government eLink highly resilient to changes in the business formats of the exchange. In Government eLink, terminology for the messages in the exchange are called eLink-documents. An eLink-document consists of a eLink-label and one or more application data elements. The application data can be anything from sound files, pictures, word-processing documents to highly structure information coded in XML or EDIFACT. Digital signatures can be applied to individual data elements.

Government eLink is based on established and proven Internet standards and techniques such as TCP/IP, HTTP, SSL, S/MIME, XML, PKI, X.500 and LDAP. Government eLink is designed to work on any TCP/IP network; from private networks, VPN to the global Internet.

The generic security services are implemented in several layers. The information transfer is secured by using strong authentication and encryption using SSL and X.509 certificates. Currently two certificate authorities (CA) issue certificates that are used to ensure the secure transfer of information between public agencies, using Government eLink.

Furthermore, end-to-end encryption and electronic signatures can be used between applications to further increase the security level. On top of this each Government eLink node creates an audit trail and each Government eLink-document carries a history.