SNS

Web services of the National Health System

Ministry of Health and Consumption

Paseo del Prado, 18-20 / 28071 Madrid

CHARACTERISTICS

The National System of Health in Spain has been formed by the administrative decentralization as a result of the competencies of management to all the Autonomous Communities. Within the framework of the initiatives of the Plans of Action for Ehealth in Europe, the Ministry of Health and Consumption has been developing systems of inter-operability that will foment the network between organizations, extend the areas of access to information and will permit future exchange of information inside the European Union.

INTEROPERABILITY OF THE SYSTEM

In 2003, the Web Services of the National Health System began to operate enabling the exchange of information and the integration of systems for the 17 Regional Health Services.

These web services enable the exchange of information from the Data Base of Information of Users of the Electronic Health Card, programmed Derivation of patients (Fund of Cohesion) and they will permit the exchange of information of Electronic Recipe and Electronic Health Record in order to make a patients' mobility possible.

The Web Services of the National Health system are based on a scheme of inter-operability that permits the integration of the different systems of the Autonomous Communities by using standard exchange of information by means of XML messages (standards of market of widespread acceptance) and enabling the independence of the platforms and applications.

Some characteristics of the plan of inter-operability are described below in detail.

1. CENTRAL NUCLEUS OF SERVICES

The server of the NHS is made up of a central nucleus to deal with messages, and by specific services, which provide the necessary function.Today, the NHS implements the service of users Health card identification and the service of the patient derivation programmed assistance. The nucleus of the NHS is a central server, accessible today throughout a SANITARY INTRANET (Health NET), which enables access to the NHS throughout an exclusive and dedicated network.The access of the client systems to the NHS throughout the above mentioned network, guarantees the level of service with regard to the bandwidth, time of response, etc., and in addition, increases the security of the system.

2. NO REGISTERED USERS

The private users, agents, or professionals, do not access the information and services of the central nucleus, but rather, to the services offered in the Regional Health Service.

The applications officially installed in the Regional Health Services are the ones responsible for generating the corresponding XML messages.

3. EXCHANGE OF CODED AND ELECTRONICALLY SIGNED MESSAGES

To guarantee the safety and the communication between the client systems and the nucleus of the NHS, code is used by means of the protocol SSL v3. This guarantees the privacy of the information and any exposure to un-authorized third parties.

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4. INDEPENDENCE OF THE PLATFORMS

When standard technologies are being used, the integration of a system with the base of information of the NHS does not need a specific software and hardware platform for the systems that try to join.The base of information of the NHS can operate with any system that is capable of generating, sending, receiving and processing XML messages. As XML is the standard of exchange, the system is prepared for a rapid integration by other applications or systems that use the above mentioned standard, not only on a national level, but also a European one.

5. INCORPORATING NEW SERVICES

The nucleus of the HNS is based on a joint nucleus of exchange, capable of processing any XML message. The incorporation of new services is carried out by means of definition of new XML messages, which enables the presentation of new functions re-using the existing platform.The operation mode does not change.
The definition of new services in the NHS client involves developing modules of treatment for the information in the systems:The generation of the XML from the information contained in the systems, and the treatment of the XML messages received. It's important to note that the whole nucleus of exchange, messages and queue handling, the locating procedure and of security, all form part of the nucleus of the NHS, therefore, it is not necessary to implement anything else to the new services.

6. IMPLEMENTATION OF QUALITY PROCEDURES

Being a centralized server and having all the information available, procedures of quality are established of precise information. In this way, unique standard codes are assigned, for all the Regional Health Services. In the case of the Health Card service, the NHS generates a unique code of identification for every protected person which is accessible from any Regional Health Service and, in addition, will permit the inter-operability of the different electronic health cards maintaining the existing information of each one.

Server of Exchanges of the SNS

Global plan of operation

MINISTRY OF HEALTH

REGIONAL HEALTH SERVICE

APPLICATION SERVER

Interchange Kernel

Dispatcher of Services

XML Parser

WEB SERVER

INTERCHANGE SERVER

XML Adapter

XML Parser

Asynchrony

Notifications

Synchrony

NOTIFIC.

DATA BASE SERVER

Services

HEALTH CARD

ELECTRONIC PRESCRIPTION

COHESION FUND

OTHERS...

Programs

HEALTH CARD

ELECTRONIC PRESCRIPTION

COHESION FUND

OTHERS...

DATA BASE SERVER