



## EUROPEAN COMMISSION

DIRECTORATE-GENERAL III

INDUSTRY

Legislation and standardization; telematics networks

**Standardization, including industrial aspects of electronic commerce**

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### **Standardization mandate to CEN, CENELEC and ETSI in the field of health care informatics**

## **1. BACKGROUND AND MOTIVATION**

### **1.1 Importance of health care informatics**

While health services today are mainly local or regional, an increasing pan-European market is emerging. The important scientific knowledge base for the health services has been global for many years. A number of ICT information services, particularly US-based, are already being provided and are developing rapidly. It is important that Europe also acquire a competitive edge on this aspect.

Health care is a service sector that is unusual in its high dependence on information management. It is estimated that 35-45 % of all labour time is spent on handling information in a broad sense. In addition to managing the large quantity of resources and meetings with the users and patients, a core element of the service produced is in many cases pure information. For example, health care professionals provide expert advice on the cause of a health problem and propose action plans to cure or improve the condition. Many sub-services never treat patients directly but provide information to persons who handle direct care. Furthermore the protection of public health and the achievement of the single market in pharmaceuticals, require a high level of collaboration between the competent authorities in Europe and a permanent communication between them and between medical practitioners, specialists, pharmacists, industry and the public.

### **1.2 Impact of ICT technologies in the health care sector**

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In spite of the potential use of ICT in health care, the sector is still very far from making best use of technical possibilities. In only a few European countries has any major shift from the highly inadequate paper shuffling been stated.

There are several reasons for the weakness of market forces in providing good ICT support for the health care sector:

- the complexity of health care and thus the systems required are relatively high, asking substantial long-term investment;
- the supply side in Europe is mainly covered by relatively small companies, operating almost entirely in one country;
- buyers are divided across a large number of relatively independent organisations;
- standards for interoperability have been lacking, making IT systems isolated, despite the great necessity for communication.

The fast pace of development in ICT is ever increasing. Health services are also evolving very substantially with regard to organisational structures. The use of ICT in support of an efficient services market is only one factor, but a significant one. It may also reduce the cost of health care, which is in the interest of the public authorities. The underlining purpose of the application of ICT in the health care sector must be to provide efficient and adequate health care services to patients and citizens (payers).

### **1.3 Relationship with Electronic Commerce**

Health care informatics has to be considered as being a specific sectorial application of electronic commerce, itself defined as “doing business electronically”. The Communication<sup>1</sup> of the European Commission “A European Initiative in Electronic Commerce” identifies electronic commerce as a priority Community policy and proposes a strategic initiative in this area. Electronic commerce encompasses many different activities already established in the health care sector and business procedures that need to be developed to stimulate the competitiveness of the sector and of the European ICT industry (as a supplier of systems to the European and global markets).

In particular electronic commerce is based on the electronic processing and transmission of data, such as text and images, as part of the services provided. It is a means to develop the internal effectiveness of an organisation in a business re-engineering process. This may be applicable to a single organisation or may include joint efforts with external organisations, creating “virtual” collaborating business structures.

Defined in this way, electronic commerce has to be considered as being a strong component of health care informatics. In the future, electronic commerce will directly involve patients as users of ICT solutions. In particular the management aspects in the health care sector have now already a substantial electronic commerce dimension.

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<sup>1</sup> COM(97)157 of 15 April 1997 - Communication from the European Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions.

## **1.4 The international dimension**

The health services market is today mainly local, regional or national. ICT will change this situation in some important areas, to create a true European and even global market. The physical care of people will continue to be a mainly local activity, but a substantial and growing pan-European and international market for health care IT systems is emerging. For some specialised laboratories and digital imaging systems European, American and Japanese companies already operate in a global market.

Although there is now a widespread feeling that international standardization for health care informatics is the preferred solution, there is a deep concern that without strong European work in this area, international work may not take into account the needs and interests of Europe.

- American companies in this field, which are often large ones, benefit from a large homogenous domestic market. Two advantages are of course a single language and a common reimbursement system. Traditionally formal national standardization has been weak in the US, with market leaders setting some de facto standards, at least for a period. However the rapid progress of European standardization in health care informatics has recently changed the US approach. A related body (the ANSI/HISB) has been set up and a proposal has been developed for international standardization, led by the US under the auspices of ISO, with a clear aim, by important industrial groups, of using this framework to promote existing US specifications in the global market.

- This raises also the basic question of the alternatives of a systematic approach, as proposed by Europe, or an exclusively industry-lead approach, as promoted by the US. There is strong support for the more systematic approach from many other third countries such as Canada, Australia and Japan and also from some actors within the US, e.g. from the federal government. European public support for such a standardization approach is very significant. It would be also to the benefit of Europe to use existing European standardization as a basis for international standards work and to apply the existing cooperation possibilities with ISO.

- In Europe, the industry is much more fragmented, with a preponderance of SMEs. European industry has problems competing with large US or Asian companies, as regards resources for long-term investments and participating in international industry alliances. Continued, even increased European activity is required to ensure that the European industry remains competitive and meets the user requirements of health care organisations.

- There are several reasons why health care information systems need to be adapted to regional, national or local customer requirements. Cultural differences and variations in the organisation of health care in Europe make continued European specifications for data exchange necessary. There is also a need for the European standards bodies to ensure that technical specifications complement relevant European legislation, e.g. the Data Protection Directive, the Medical Devices Directives, the pharmaceutical legislation and the digital signature legislation that is in preparation.

## **1.5 Links with European Union R&D programmes**

The European R&D programmes have contributed to standardization activities in health care telematics since 1988. They have promoted the establishment of CEN Technical Committee on Medical Informatics. Many produced standardization items benefited from the results of European R&D projects. Cooperation between R&D and standardization activities should continue to ensure that European Union results of research activities are exploited and that they allow proper validation of standards and draft standards in relevant EU programmes.

The Telematics Applications Programme and its forerunners in the 2nd and 3rd European R&D Framework Programmes were evaluated last year by a review panel that submitted its report to the European Council and Parliament in October 1996.

In the general conclusions related to standardization it was stated that standards (whether de facto or de jure) are an integral part of the logical infrastructure. This creates user confidence in the supplier. European success stories on the global stage in the telematics field were strongly influenced by standardization activities at a crucial stage in the development process.

Strong support is needed for health care telematics standardization to improve the likelihood of reaching a real market, to create opportunities for the health care telematics industry. There are two reasons for this:

- Standardization can reach a wide consensus of users and industry, in many cases creating a workable compromise between existing proposals and ensuring that user requirements (possibly affected by national circumstances) are taken into account. In the R&D projects the aim is to do research into new areas of applying ICT, although the basic principles behind a new standard may be developed.

- Standardization generates overall market support by the standardization process through the involvement of market actors, while for R&D programmes, support should be given to successful commercial consortia.

Against this background it therefore seems appropriate and useful to take further measures to promote continuously the results of European sponsored R&D projects in the field of standardization .

## **2. NEED FOR EUROPEAN STANDARDS**

The development of standards in such a complicated field as health care informatics, together with the formal consensus processes in the European standards bodies, requires time. On the other hand the broad involvement of users and suppliers of systems, with the inclusion of government representatives where appropriate, creates a framework for beneficial stability, which is necessary for large scale investments in ICT. Standards in this area are therefore really necessary for the development of a new health care services market.

From 1989, the economic and strategic importance in Europe of standardization in the field of health care informatics has been recognized. In 1990 and in 1993 respectively a study mandate and two standardization mandates were addressed to CEN. This European standards body responded positively to these requests by creating a structure (CEN/TC 251 and several working groups), by developing many activities and by adopting several standards (see annex 1). A report summarising the results of the standardization work programme from 1990 to 1996 is given in annex 2 and 3.

On 30 January 1997, an open meeting was organized by the Commission to obtain the opinion of the interested parties<sup>2</sup> on the past standardization activities, and to identify possible needs and new actions. Whilst participants expressed general satisfaction with the work performed, and confirmed the need to continue activities in this area, some criticism was voiced on the lack of specificity in some published standards. It was also mentioned that in some areas, e.g. imaging equipment, industrial interest is entirely at the global level. Furthermore there should be a better coordination between CEN and CENELEC activities in the health care field.

As a consequence it is therefore extremely important to keep all interested partners, including national public health authorities, involved in standardization in the health care domain and to coordinate the various health care specific activities with inter-sector ICT standardization of CEN, CENELEC and ETSI in order to ensure the widest possible benefit for the European market.

In this context it has clearly to be stated that the present mandate does not require to revise the already realized standardization work, referred to in annex 1,2 and 3.

The standardization process must respond to the market requirements. This implies examining the possibilities of applying other working methods such as workshops and project teams and to accept, as far as possible, publicly available specifications as input to the formal standards approval process. The importance of public regulation of the health sector, and the fact that many health care systems fall under the public procurement directives, require the channelling of such specifications through the European standardization process. It is therefore an urgent need to reach a high degree of consensus to implement European standards successfully in the health care sector before the workplan is being established.

### **3. SUBJECT OF THE MANDATE**

#### **3.1 Phase 1 - Elaboration of a common work programme**

The three European standards bodies, CEN, CENELEC and ETSI, are invited to elaborate a common work programme with the aim of implementing the European standardization strategy, necessary for the development of the information society in the health care domain.

To ensure the widest possible acceptance and support, all possible interested parties shall be consulted in preparation of this workplan. The programme should cover all important fields, such as information models for interoperability, technical methods for the support of interoperable systems and the security of health care information systems.

The programme shall list all work items to be standardized, indicating the key elements such as the need, the European standards to be developed and adopted, the timetable and the responsible technical body. In principle EN are to be elaborated and adopted; ENVs have to be justified. Attention should also be given to the transformation of ENVs into Ens. Priority should be given to generic standards in stead of branch specific standards.

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<sup>2</sup> participants: representatives of different Commission services, EFTA Secretariat, CEN, CENELEC and EBES, as well as some industry organisations.

In presenting the programme and the subsequent reports, the European standards bodies shall indicate which interested parties were identified, how their comments were sought and dealt with, and which measures have been taken to keep them involved.

The programme shall be presented to the Commission, who will inform the national authorities through the SOGITS and the 83/189 Committee.

### **3.2 Phase 2 - Elaboration and adoption of European standards**

The European standards bodies shall implement the common work programme by developing and adopting the European standards, indicated for health care informatics.

It is important to take fully benefit of international standardization and to use all necessary instruments to ensure European participation at international level.

### **3.3 Necessity for close collaboration**

While carrying out these two phases, appropriate coordination and liaison with relevant activities should be established at international and regional level to achieve the necessary level of coherence and interoperability. Liaison has to be established with other areas of ICT and with related domains such as medical devices and pharmaceuticals.

Within the ICT domain coordination shall be established with relevant CEN, CENELEC and ETSI activities. Particular attention should be given to all activities within the scope of electronic commerce and relevant to the health care domain, such as messaging, security and privacy. Adequate liaison should also be established with R&D programmes such as ESPRIT, Acts and the Health care Telematics Applications Programme.

### **3.4 Follow-up of the two phases**

Elaboration and implementation of the work programme will be subject of a follow-up by the national authorities through the SOGITS and the 83/189 Committee. Therefore progress reports shall be presented by the three European standards bodies to these committees, at intervals to be set in consultation with the Commission.

If necessary, the Commission will organize, during the ongoing process, public meetings with all interested parties, to verify whether the activities carried out in the programme will meet the real needs of the market.

### **3.5 Evaluation report**

Two years after the adoption of the main standards, an evaluation report shall be presented by the European standards bodies to the Commission on the use of these standards in real implemented systems, on their economic impact on the health care ICT industry and on the impact on the health care sector itself.

The terms of reference of the report shall be agreed between the three European standards bodies and the Commission services.

#### **4. EXECUTION OF THE MANDATE**

4.1 The common work programme shall be submitted to the Commission before 1 March 1998.

4.2 Elaboration of the standards

- Acceptance by the European standard bodies of the work programme shall, for all items on this programme, start the standstill clause referred to in Article 7 of the Directive 83/189/EEC of 28 March 1983 (OJ n°. L 109 of 26 April 1983), amended for the last time by the directive 94/10/EEC (OJ n° L 100 of 19 April 1994) .

- Within 6 months after their adoption, the EN standards shall be transposed into national standards and diverging national standards shall be withdrawn in the Member States of the European Union.

- CEN, CENELEC and ETSI shall cooperate closely at all necessary levels to develop and adopt a coherent and complete set of European standards.

4.3 Relevant problems and suggestions for changes in the execution of this mandate shall be communicated in time to the Commission services.

- Annexes:
1. Completed work of CEN/TC 251
  2. Review of the CEN work programme 1990-96
  3. Work of EBES

## **Annex 1. Completed work of CEN/TC 251**

- ENV 1064 Medical Informatics - Standard communications protocol - Computer-assisted electrocardiography
- ENV 1068 Medical Informatics - Health care information interchange - Registration of coding schemes.
- ENV 1613 Medical Informatics - Messages for exchange of laboratory information
- ENV 1614 Health care Informatics - Structure for nomenclature, classification and coding of properties in clinical laboratory sciences
- ENV 1828 Medical Informatics - Structure for classification and coding of surgical procedures
- ENV 12017 Medical Informatics - Medical Informatics Vocabulary
- ENV 12018 Medical Informatics - Identification, administrative, and common clinical data structure for Intermittently Connected Devices used in health care (including machine readable cards)
- ENV 12052 Medical Informatics - Medical Imaging Communication
- ENV 12264 Medical Informatics - Categorical structures of systems of concepts - Model for representation of semantics
- ENV 12265 Medical Informatics - Electronic health care record architecture
- ENV 12831 Medical Informatics - Time standards for health care problems
- ENV 12388 Medical Informatics - Algorithm for Digital Signature Services in Health Care
- CR 12587 CEN Report: Medical Informatics - Methodology for the development of health care messages
- ENV 12435 Medical Informatics - Expression of the results of measurements in health sciences
- ENV 12443 Medical Informatics - Health care Information Framework
- ENV 12537-1 Medical Informatics - Registration of information objects used for EDI in health care - Part 1: The Register
- ENV 12537-2 Medical Informatics - Registration of information objects used for EDI in health care - Part 2: Procedures for the registration of information objects
- ENV 12538 Medical Informatics - Messages for patient referral and discharge
- ENV 12539 Medical Informatics - Request and report messages for diagnostic service departments



## **Near Completion at formal vote end of 1996**

prENV 12610 Medical Informatics - Medicinal product identification

prENV 12611 Medical Informatics - Categorical structure of systems of concepts - Medical devices

prENV 12612 Medical Informatics - Messages for the exchange of health care administrative information.

## **Items near submission to formal vote early 1997**

- 1.3 Standards Architecture for Health care Information Systems
- 4.2 Medical Image Management Storage Commitment Service Class
- 4.9 Medical Data Interchange: HIS/RIS PACS and HIS/RIS Modality Interface
- 4.12 Media Interchange for Medical Imaging Communication
- 5.1 Vital Signs Information Representation
- 6.11 Secure User Identification for Health care; Identification and Authentication by Passwords - Management and Security
- 6.14 Framework for security protection of health care communication
- 6.15 Framework for security requirements for Intermittently Connected Devices.

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## **ANNEX 2 Review of the CEN work programme 1990-96<sup>3</sup>**

The European Committee for standardization of Medical Informatics (CEN/TC 251) was started in 1991 after a year of preparatory planning. With the support of the Commission it has achieved European consensus in a number of key areas and established itself firmly as an important actor for European health telematics and also a world leadership in the area. The work has received high attention by both health care user organisations and National health authorities as well as by the still immature health telematics industry. Technically complicated standards have been developed that enable interoperability and an open market, e.g. for laboratory services and other standards which provide an important methodological foundation for the further work. The total work programme during this period has resulted in 30 standards and technical reports, listed in Annex A.

A meeting to review the work performed and discuss the future Commission policy was organized by DG III on January 30, 1997. Representatives of the Telematics Applications Programme of DG XIII characterised the work as a definite success and acknowledged the need for further support. It is important to compare the funds spent (6 Mecu) both with the estimated 8 MECU of voluntary work by industry and others in TC 251 and the 267 Mecu spent on the R&D programme for health telematics. A number of health telematics industry representatives stressed the importance of further European standardization in the area to develop the market, e.g. for the electronic health care record although certain aspects of imaging equipment need attention on the global level. Also representatives of DG V expressed the requirement for standard to support public health and goals in relation to the free movement of people of the union.

### **The continuous review of the work by the National Standards Boards**

The work of a CEN committee like TC 251 is carefully controlled through the 18 National Standards bodies of CEN and the CEN central secretariat with the BTs and other groups. The interest in the specific activities of a committee varies depending on the subject but the interest for Medical Informatics has been unusually high with some participation from all the countries including the smaller ones with more limited resources. This means sending National representatives to the plenary meetings for decisions and technical experts to the various working groups. It is noteworthy that the heads of the national delegations in CEN/TC 251 usually are very senior officials in one way or another representing the ministries of health in their country. In most of the countries there exists mirror committees to TC 251 and sometimes also to each of the working groups. In this national work which is an important part of the TC 251 European collaboration, the health care sector is very widely represented from authorities, provider organisations, professional groups and not the least Industry. In all about 2000 persons in Europe contribute regularly to the work of CEN/TC 251. The first important task of this large group of domain experts representing European health care has been the establishment of a work plan with highly motivated items for standardization. As an example in the establishment of the current work programme over a year of extensive discussions and national votes preceded the decision to forward some of the proposed work items to CEN/CS and the Commission. The second important evaluation of the work is the approval of the draft standards by the national voting process. In no case has

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<sup>3</sup> Report prepared by Mr.Klein, Chairman of CEN/TC 251

a CEN/TC 251 draft standard been turned down in the formal vote but usually approved unanimously. This is particularly remarkable considering the fact that a relatively large number of difficult items have been processed that includes some political sensitivities. The project team experts that have been funded through mandates are only paid upon approval by the formal standards groups at various stages.

This important review and continued commitment also to very substantial voluntary contributions to European standards in this field is perhaps the best possible evaluation.

A few key examples of standardization areas are presented here with examples of achieved results and some reflections on the future work needed.

### **The laboratory services example**

In laboratory medicine, particularly, in biochemistry and haematology, there has been a long tradition of using automated techniques and internal IT-support. Electronic interfaces have been developed in recent years for communicating with the customers. Firstly, and still dominating, were proprietary solutions developed by one company often in liaison with one hospital laboratory. Different formats create problems for integration of system solutions from different vendors.

Following several early European collaborative development projects in the area supported by DG XIII, a formal standardization was started within CEN/TC 251 (Medical Informatics). A detailed standard (over 200 pages) was developed under mandate BC-IT 216 from DGIII. The data model of this ENV 1613 has been implemented in EDIFACT syntax by a number of different companies and is already used in the Netherlands, Belgium, France, UK, Finland, Sweden, Denmark and Norway.

This standard stimulates Electronic Commerce in the field where formal orders for tests are placed using networks, and results of the service (the test results) are delivered immediately using network services. The use of standard message handling services to connect buyer and seller has many advantages including facilitating easy expansion of the geographic market of a laboratory. Even in countries where health care services are publicly financed and controlled, laboratory services are today largely sold on a competitive market. We already have examples of a cross border market developing, e.g. between Belgium and the Netherlands, France and Germany, Sweden and Denmark.

It is noteworthy that this European development has occurred in competition with a US industry solution called HL7. This solution has been considered insufficient by leading European actors but it is aggressively promoted by some large American companies. However, HL7 itself is now considering using information models developed by CEN/TC 251 and the EDIFACT platform that started in Europe and has been adopted by the rest of the world.

### **ECG and Imaging**

European standards have also been developed for Electronic Commerce of other diagnostic services. Physiology laboratories performing, for example, analysis of heart functions are today receiving electronically requests for services including sometimes a remotely taken ECG<sup>4</sup>. Results are delivered over the network.

Digital imaging, often using sophisticated computing and detector techniques such as NMR, completely changes the traditional X-ray departments. Standards are essential for the integration of various highly expensive image creation, analysis and archiving systems. In this field where also a number of European companies operate on the global market, the European standardization created a fruitful collaboration with the relevant American body<sup>5</sup>. The European input created important improvements to the proposed US standard and compatible specifications are now published both by CEN and the American organisation.

### **The Electronic Health care Record in the Centre**

In order to achieve an open market for electronic services in the health care sector, the patient record is the most strategic factor. The modern electronic record is the central management tool for the core clinical activity. It can be extremely complicated and with great variation among different specialist fields and local management practices. However, there are important core requirements that European health care professionals agree on which provide a basis for a standardized architecture that will allow exchange of information between establishments.

A basic standard for Electronic Health care Record Architecture (ENV 12265:1996) has been produced. However, more precision is required in order to ensure interoperability between system solutions provided by different companies. In the new work programme of CEN/TC 251, the health care record has a central role. Standardization in this area can benefit from the development activities sponsored by DG XIII in the Health Telematics programme as well as from the specific demonstration and validation projects funded under the ISIS initiative of DG III (SEMRIC and MEDSEC).

### **Security of Communication**

Another key area of the work ahead is to establish common methods for achieving security protection of communication. As pointed out in the Bangemann report on the Information Society in 1994, and the EU Data Protection Directive, the health field carries particular sensitivities with regard to privacy which are a challenge for the Information Society.

There are also, in many cases, particularly strong legal requirements for proof of authenticity of documents where electronic documents without signatures simply cannot be accepted. These requirements have considerably delayed the utilisation of ICT in the health care sector. The diversity of organisations that need to communicate means that

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<sup>4</sup>ECG = Electrocardiogram

<sup>5</sup>ACR-NEMA

security for communication cannot be achieved through internal business decisions. European Standards solutions are demanded by the market.

Whereas a starting point exists through the previous work of CEN/TC 251 and the security projects sponsored by DG XIII in the area, e.g. TrustHealth and SIREN, important standardization work needs to be carried out through CEN. The work in this field should not be regarded as health care specific inventions but involves important selections of current "state of the art" solutions. These can be taken from various available sources, including the international industrial groups that have provided several solutions. A profile for European health care would allow industry to invest in development and integration of specific security solutions. At the same time a direction would boost the investments of health care establishments and operators in providing an infrastructure for the key management necessary for modern cryptographic techniques.

### **Why terminology is important**

The EAN system for coherent numbering of goods has been an extremely important facilitator for IT in retail.

In the health services sector with *Information* as one of the key products, a common understanding of concepts and the terms (and often codes) used to denote them, is similarly important. The complexity of the problem should not be underestimated. Common medical dictionaries list more than 300,000 terms and many more are used in special fields. In addition, information objects to be communicated over networks need to express complex relations between terms in an unambiguous way. The diversity of European languages creates special obstacles to a cross-border market.

However, important European and international terminology work has been going on for decades and can be built on. The use of ICT for creating an infrastructure for a European health market emphasises the need for rapid progress in this area. TC 251 has an important role. The completed standards and planned activities aim at providing the common structure for terminology work suitable for use in health care ICT-systems. These standards can be applied to existing nomenclatures and guide the further developments of various organisations, e.g. the professional societies.

Industry needs standardized conceptual and terminology systems to meet user requirements for functionality but it has usually little possibility to provide the solutions itself. Therefore, public financing of terminology standards is very important for the industry but with little direct involvement in the work to be expected.

### ANNEX 3. EBES/EEG9 HEALTHCARE STANDARDIZATION WORK

EBES (European Board for EDI Standardisation) formerly known as Western European EDIFACT Board, Expert Group 9 – Healthcare was established in 1992. It has from its start had a close collaboration with CEN/TC251 Medical Informatics. The purpose of the EEG9 is to meet the demands for standardized messages when exchanging healthcare information. EBES is part of the UN/EDIFACT world based on an international standard syntax and a system for managing coding and registration of messages and message elements.

In the work of EBES/EEG9 developments and requirements have to be considered that come from other sectors such as transport, commerce, finance etc. both in Europe and from other parts of the world to ensure a consistent system of messages. The interest in EDIFACT based messages for healthcare outside of Europe, especially in North America and Australia has grown during the last couple of years which means that the European work needs to be harmonized with these regions. This is quite a challenging task.

In several important areas CEN/TC 251 has developed extensive syntax independent message models (e.g. for laboratory results and requests) that have been published as European standards or prestandards. In addition the TC251 project teams developed EDIFACT implementations of these messages that were submitted to EBES/EEG9 for formal processing and registration in the UN/EDIFACT world. The CEN/TC251 work and formal consultation process ensures a very extensive involvement of all relevant actors but may in some situations be considered to be too slow.

EEG9 has responded to important user needs also for other message areas where proposals for message specifications have been developed by a company or a national organisation and submitted for possible registration as an EDIFACT message (first status 0). Examples are MEDRUC for resource utilisation and MEDPRE for prescriptions.

The close collaboration between EBES/EEG9 and CEN/TC 251/WG3 with a number of common members of both groups and frequent joint meetings is expected to continue. The EBES/EEG9 chairman, presently Mr Stig Korsgaard, National Board of Health, Denmark has always been attending the CEN/TC251 plenary meetings and the chairman's advisory group.

He can be reached at +45 33 91 16 01, E-mail sk@sst.dk

#### **Messages development from EBES/EEG9**

##### **MEDRPT - Medical Service Report message**

**Function:** A Medical Service Report message is sent from a service provider to the service requester to report new results on performed investigations, to modify a previous result item or a complete result report or to cancel a previous result report. Status 1:

**Usage:** Status 0 in use in Sweden, the Netherlands and Norway. Status 1 proposals implemented in Norway, Sweden, UK and Denmark.

### **MEDREQ - Medical Service Request message**

**Function:** A Medical Service Request message is sent from a service requester to the service provider to order investigations, to modify a previous order or ordered investigations or to cancel a previous order. Status 1

**Usage:** Status 0 in use in Sweden, the Netherlands and Norway. Status 1 proposals implemented in Norway, Sweden, UK and Denmark.

### **MEDDIS - Discharge Summary Letter message**

**Function:** To pass administrative and medical information about a patient from one care service provider to another in connection with the termination of a treatment episode.

**Status 0:** Preliminary proposal is being prepared by CEN TC251 PT3-024.

### **MEDREF - Health Care Referral message**

**Function:** To pass administrative and medical information about a patient from one care service provider to another in connection with the request for services and/or transfer of responsibility.

**Status 0:** Preliminary proposal prepared by CEN TC251 PT3-024.

### **MEDREC - Medical Record message**

**Function:** A Medical Record message is used for transfer of complete or parts of medical records. The message may include new or updated demographic information, visit information and/or medical information about a patient.

**Status 0:** Several very early proposals exist, but so far none according to the European pre-standard for Electronic Healthcare Record Architecture.

### **MEDPRE - Prescription message**

**Function:** To pass information on drugs or other products from authorised healthcare persons to a pharmacist.

**Status 0:** Status 0 implemented in Norway and US.

### **MEDPHV - Pharmacovigilance message**

**Function:** To pass information about drug safety hazards between pharmacovigilance working parties (i.e. national, super national, etc.) in a structured, reliable and rapid way.

**Status 0:** Preliminary proposal exists

### **MEDADR - Adverse Drug Reaction message**

**Function:** To pass information on an experienced adverse drug reaction episode from a reporter, usually health personnel, to a pharmacovigilance working party.

**Status 0 proposal:** as submitted spring 1996. **Usage:** A previous version of this message has been tested in the Euroscape project between authorities in Spain, France and UK.

### **MEDADT - Patient Administration message**

**Function:** To pass information about a patient treatment episode to other parties in connection with admission, transfer, discharge, etc. and on request.

**Status 0:** Preliminary proposal prepared by CEN TC251 PT3-023.

### **MEDAUT - Medical Authorisation message**

**Function:** For a healthcare service provider to exchange information on the authorisation of a patient treatment or examination from an authoriser (i.e. insurance company or regional/national governmental authorities).

**Status 0:** Preliminary proposal exists.

### **MEDPID - Person Identification message**

**Function:** To pass administrative information about a patient to other parties.

**Status 1:** Status 0 in use in the Netherlands and France.

### **MEDRSP - Medical Status Response message**

**Function:** To pass status information back to the initial sender concerning acceptance of message at application level.

### **MEDQRY - Medical Query message**

**Function:** A medical query message is sent from the requester to an information system requesting the transfer of medical information as specified in this message. The result of the query is transferred using MEDREC, MEDRPT or any other relevant message.

### **MEDRUC - Resource Usage / Cost message**

**Function:** To pass information of resources used or expenditure incurred in providing healthcare services.

Status 0. **Usage:** Status 0 implemented in France and Denmark.

### **IHCEBR - Interactive Health Care Eligibility and Benefit Information message**

**Function:** This message can be used from healthcare information sources (i.e., insurers, sponsors, payors) to healthcare information receivers (i.e., physicians, hospitals, medical facilities, pharmacies). This information includes but is not limited to: benefit status, dependent coverage level, dates of coverage, covered days and/or non-covered days, amounts for co-insurances, co-pays, deductibles, exclusions and limitations.

**Status 0:** Preliminary proposal exists

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