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An Interoperability Platform for Telemedicine Services in the Veneto Region

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Telemedicine applications in Veneto Region Health Service were in some cases fragmented and scarcely interoperable among the 23 Local Health Authorities (LHAs) spread over the regional territory. Arsenàl. IT, Veneto's Research Centre for eHealth Innovation worked giving technical advice in the European Telemedicine Project called HEALTH OPTIMUM and released implementation guidelines (on the basis of IHE Integration Profiles) to set up Telecounselling Service for Neurosurgery, Telelaboratory and experiment with other new services (e.g. Stroke Management and Oral Anticoagulation Therapy).

These guidelines were designed adopting in a coordinate way the most advanced IHE Integration Profiles (e.g. XDS, XDS-I, XCA, etc…) and the most authoritative e-health standards (e.g. ebXML, XML CDA2, DICOM, PKCS#7, etc.). This facilitated interoperability between the 23 LHAs divided in seven different provinces, through a federal approach where each province is independent and where it is possible to share digitally signed Reports (XML-CDA2 documents) and DICOM CT Images.

The greater challenge taken up by Arsenàl. IT is to switch-on a Regional Telemedicine platform composed by seven heterogeneous Domains that have adopted both open standards and legacy solutions.

Taking advantage of this cooperation platform, a Governance System of Telemedicine Services is being developed with the purpose to check and monitor all systems and applications, provide the semantic interoperability (thanks to the adoption of a common coding system), the correct pricing of the service and the ability to carry out statistical analysis.

The key purpose of these applications is to avoid useless patient transfers, guarantee the continuity of care provision in all regional territory (about five million inhabitants spread over 18.000 km2), tearing down the economic and organisational costs. In addition, the use of open standards provides the necessary flexibility to extend the telemedicine services also to other clinical fields of use (e.g. Cardiology, Gastroenterology, etc…).

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