



Jeroen van Weert
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IHE XDS-compliant data exchange:

The connection for optimized care

As a hospital with a level 3 intensive care unit – the highest quality label of the Dutch intensive care association – Elisabeth Tweesteden Ziekenhuis in Tilburg, the Netherlands, is a leading trauma centre that hosts and treats trauma patients from all over the region. Quick, safe and reliable data exchange with referring hospitals is a crucial element of the hospital's workflows. St. Elisabeth Ziekenhuis found a way to design this element without having to establish physical IT networks with every potential cooperation partner: IHE XDS, an international standard tailored for healthcare data exchange.



Generally speaking, IHE XDS contains the definition of a three elements: a registry, a repository and a consumer. The registry serves as a node that coordinates the requests for data; the repository is responsible for uploading requested data and making them available via the registry; and last but not the least the consumer is dealing with the data in the requesting institution.

»XDS allows us to strengthen and optimize existing collaborations.«

“For us XDS is interesting because it allows us to perform two major tasks: The first one is the creation of stable networks for trauma cases within our region. XDS enabled us to strengthen and optimize our existing collaborations. Moreover, using an internationally recognized standard for data

exchange makes networking more interesting for potential partners because it can be used independently from existing IT infrastructures. The second reason why XDS is so important for us is our cooperation with external partners such as a radiotherapy center here in Tilburg. This institution provides radiotherapy and nuclear medicine services for our hospital and they suggested switching to an XDS-based image exchange,” explains Jeroen van Weert, responsible for radiological IT at Elisabeth Tweesteden Ziekenhuis.

JiveX Integrated Imaging PACS-II paved the way

For the implementation of such an XDS network, the Tilburg hospital relies on an experienced partner: Alphatron, the

VISUS JiveX sales partner in the Netherlands. Currently, Elisabeth Tweesteden Ziekenhuis uses JiveX Integrated Imaging (PACS-II) as a facility-wide image archive irrespective of department, source or data format, as Jeroen van Weert stresses: “JiveX Integrated Imaging can handle all image sources by converting the images into internationally recognized standards. This unification is the precondition for external data exchange since it allows the data to be used and displayed in a vendor-neutral way.”

Since the IT experts from Tilburg have been working with the VISUS system very successfully and are particularly impressed by the company's innovation potential they decided to establish a partnership for jointly developing an XDS concept. The following scenario is envisaged: Whenever the radiologists from Elisabeth Tweesteden Ziekenhuis upload images to the hospital repository a message is sent to the registry which informs the partner institution that new data are

available and where they can be found. The partner hospital searches the registry and downloads the relevant information. Vice versa, a repository AT Elisabeth Tweesteden Ziekenhuis team receives notifications from the registry and downloads the medical information for use in the hospital. Patient identification is ensured by the personal ID number that is allocated automatically to each Dutch citizen and which is used for healthcare, insurance and tax purposes.

“Currently, we are in the development stage. The consumer runs but is not linked to the PACS server. The aim is to have it in the PACS as soon as we use it in our daily business. The repository is work-in-progress at the moment: it works on the test system and we are looking forward to running it on the regular system. In this context, there was another reason for us to work with VISUS: The new release JiveX 5.0 is perfectly designed to support XDS, for example by embedding the registry better,” Jeroen van Weert adds. Moreover,

VISUS developed DSUB, a subscription system within XDS that automates image exchange without intervention by the physicians. As soon as the subscription has been established, all patient-related images are transferred automatically. In short: Jeroen van Weert is convinced that XDS and the way it is used in the VISUS system will substantially improve patient care by simplifying communication and work processes that are indispensable in modern healthcare settings.