

TENPET aims to create a network of Positron Emission Tomography (PET) Centres across Europe connected via telecommunication and telemedicine services.

PET Centres currently operate in each European country, separated by language and cultural barriers, whereas some are specialised on particular cases (oncology, cardiology or neurology) and others count only little time of operation and consequently need support, training and advice from Centres with long-year experience.

TENPET brings all PET Centres in Europe (and beyond) closer, by integrating advanced medical imaging technology and health telematics networks applications into a single, easy to operate health telematics platform, which allows PET operational costs reduction, secure transmission of medical data via a variety of telecommunications channels and fosters the cooperation between PET professionals and the development of the field.



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The members of the TENPET Consortium:



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Université de Bretagne Occidentale



MedCom Gesellschaft für
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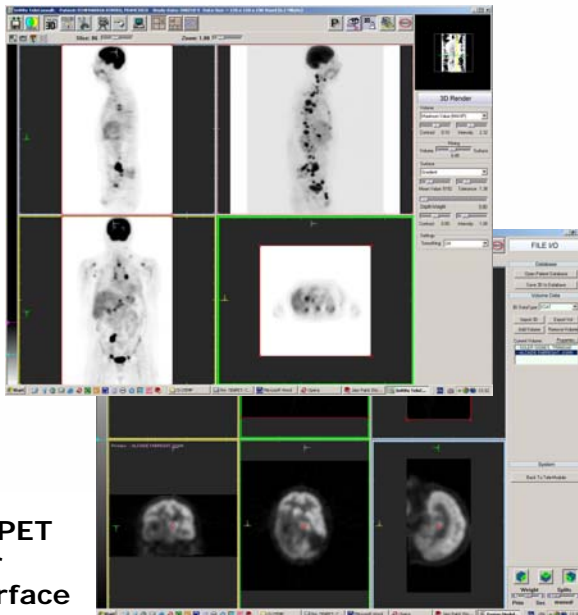


Market Validation Project
Action Line 2: eHealth



Trans European Network
for Positron Emission Tomography

PET provides physicians with unique diagnostic information which may alter patient management and reduce the total cost of patient care. It produces images of molecular-level physiological function, which can be used to measure many vital processes, including glucose metabolism, blood flow and oxygen utilization.

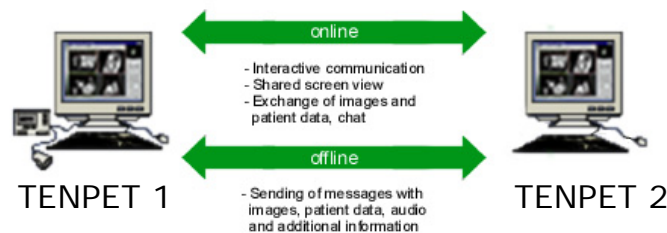


The
TENPET
user
interface

TENPET validates the market concerning the provision of integrated teleconsultation and computer supported cooperative work services between Positron Emission Tomography (PET) Centres in Europe. Four PET Centres from Spain, France and Germany currently participate to the pilot system trials. It is based on the results of the successful EU funded research TeleInViVo (Telematics Application Programme, 2001 IST Grand Prize Winner), which has already demonstrated the technical viability of the envisaged services.

The communication between two connected workstations is based on a TCP/IP connection secured by secure socket layers (SSL) and virtual private network (VPN) protocols.

The platform is provided by MedCom, runs on PCs with Windows 2000/XP and incorporates advanced techniques for image visualization, analysis and fusion. UPM offers expertise on telecommunication issues.



A teleconsultation between two TENPET workstations can be via online or offline. The online mode is implemented over TCP/IP based point-to-point connections. Images are only transmitted if they do not already exist in the database of the remote communication partner.

For synchronisation only short commands like mouse operations are transmitted. This enables online consultations even over low bandwidth connections (interface sharing).

Alternatively, two TENPET users can exchange offline information concerning a clinical case (images, patient information, text, audio messages) via the transmission of messages.

TENPET promotes the cooperation and improved communication between PET professionals, offering options for second opinion and training. It permits physicians to remotely consult patient data if they are away from their Centre or work on mobile units.

Through the provision of a bundle of services via intuitive user interface, TENPET allows the speedy, accurate and film-less communication between PET installations.

TENPET will have a significant impact in cost reduction for PET procedures, in the development of new skills by PET users and will support the establishment of peripheral PET units.