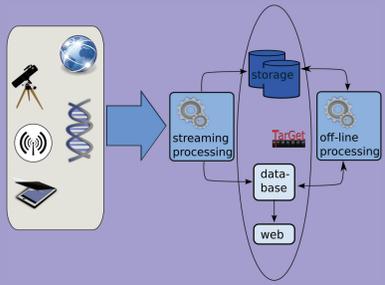
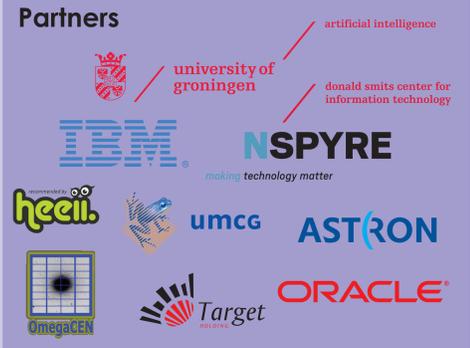


Target - Aiming for Results

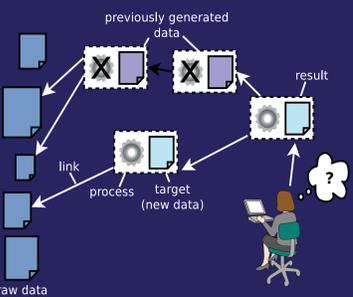


Target aims to revolutionise the management of very large amounts of data. Prominent scientific research groups and innovative businesses jointly develop and improve complex, modular and scalable data systems. The starting point is the Target paradigm: full integration of large-scale data processing, archiving and analysis.



Key technology

Target processing



TargetWISE

TargetWISE is an original Target architecture for commercial and scientific sensor data. It is based on Target's concept of intelligent information systems developed by the OmegaCEN research group for Astronomical Information Technology at the University of Groningen.

Target Infrastructure

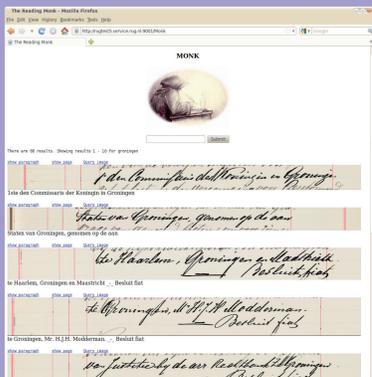
The Target infrastructure is a state of the art hardware park, which combines a huge storage capacity of 10 PB with matching bandwidth and processing capabilities. The high performance and scalability are made possible by the use of the Global Parallel File System (GPFS) provided by IBM.



Applications

Monk

Monk is a system which enables digital access to massive handwritten manuscript collections. Instead of approaching the problem as 'optical character recognition' (OCR), a manuscript collection is presented to the users via internet. Users are allowed to label words, such that word-retrieval and recognition algorithms can be trained, virtually in real time. Forty books of the Dutch Cabinet of the Queen are ingested using the Monk algorithms. The approach has also been tested on 18th and 15th century handwritten documents.



LOFAR

The radio interferometric array of LOFAR consists of 48 stations spread over the North of Europe. Each station has a number of fields with many low-cost antennas. The core stations are distributed over an area of about 100 kilometres in diameter in the North-East of the Netherlands. Several international stations have been built in Germany and the UK, and stations in Sweden and France are in the making. LOFAR will generate several petabytes of data each year. These data are stored into a distributed long-term archive, in which the Target technology and infrastructure play a crucial role.



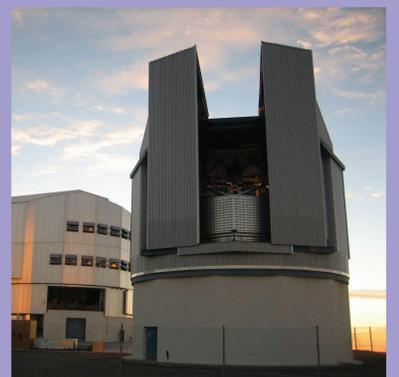
Lifelines

Lifelines is a study among ultimately 165 000 inhabitants of the three northern provinces of the Netherlands. The aim is to investigate why some people get old in a healthy manner, and others have already severe impairments or diseases early in their life. The focus is on multifactorial diseases, often resulting from a combination of genetic and environmental risk factors. To unravel the genetic factors, whole gene sequencing is used. Combined with a wide range of multiple environmental factors the data storage and processing requirements are substantial.



KIDS

Kilo Degree Survey is a 1500 square degree public imaging survey taken with the VST telescope, located in Cerro Paranal, Chile. Along with VIKING - a parallel survey in infrared on the VISTA telescope - KIDS was the trigger for the establishment of the OmegaCEN astronomical data centre in Groningen, and for the development of the Astro-WISE information system. Astro-WISE gives systematic and controlled access to the data and was the first information system in which the Target paradigm was realised. The WISE technology now forms the core of the Target environment.



<http://www.rug.nl/target>

