A virtual 'guard' that gives you greater control over your personal data has been developed by experts at Newcastle University.

The unique system works by creating a user-controlled gateway - an extra level of security through which anyone has to pass if they wish to use or share data relating to a particular individual.

Initially, the system is being trialled using photos on Facebook and Picasa, but the next step will be to protect financial information held by banks and even GPS tracking data that gives information about the location of an individual via their mobile phone.

Developed by Maciej Machulak, Professor Aad van Moorsel and the team at Newcastle University, the system will be demonstrated for the first time today as part of a national conference to discuss threats and trust in cyberspace.

The one-day conference is being hosted by Newcastle University's Center for Cybercrime and Computer Security. Being held in the Great North Museum: Hancock, the event includes demonstrations of some of the research taking place at Newcastle including work on Keystroke Dynamics, Identity Theft and Contactless Credit Card Skimming.

Maciej, project lead, said that with so many people now storing their data on the web it was important to provide them with new mechanisms that would help to secure this data but still to allow them to share this data in a controlled fashion.

"Allowing people to share their photos across different social profiles such as Facebook or Picasa in a flexible way can be very useful," explains Maciej.

"But at the same time you want to retain an element of control over this personal information.

Our system crosses these application boundaries and allows users to be able to share their online photos with individuals from various applications no matter where their pictures reside."

The next step is to extend the system to help people share personal and professional information, such as that stored on LinkedIn.

As well as opening up new possibilities for sharing information, the next step will be to use the so-called SMART AM system as a virtual gateway or barrier, protecting individuals' data from unwanted viewing, such as GPS tracking via mobile phones.

Maciej explains: "Allowing certain applications to track your location can be extremely useful. For example, if you're out of town and are looking for a hotel or restaurant then being sent that information directly to your phone application is just what you need.

"But you don't necessarily want to leave yourself open to anyone who might be wanting to use that kind of information about you. With our system the user could control what types of services should 'see' them in cyberspace and which should not. This could then filter out applications offering services that might be of use while blocking anyone else from tracking you.

"It's about taking control of all this information we have about ourselves out there on the Web.

"With the increased amount of services available on the Web, the end user is no longer able to easily control access to their distributed data and is often paying the price in both privacy and convenience. Our system allows us to share it more freely while retaining control."

Provided by Newcastle University