



Telemark University College
Faculty of Technology

FMH606 Master's Thesis

Title: Design and Development of Windows 8 Metro Application for Measurements and Monitoring

TUC supervisor: Hans-Petter Halvorsen

External partner: National Instruments

Task description:

In this project we will design and develop a Windows 8 “Metro” application for communication and presentation of weather data from the “Weather System” installed at TUC. The weather system is used to log weather data and weather forecast. We will also test out the application “Data Dashboard for LabVIEW”.

The new Windows 8 applications can be used on both ordinary computers and on tablets.

Below we see the new start menu in Windows 8 and the typical Windows 8 “Metro” appearance:





The following topics should be investigated in this project:

- Get an overview of the different platforms available on the market today (Windows 8, Android, iOS) in general, but with main focus on the new Windows 8 platform.
- One application would be to use the new Windows 8 Metro application together with a local weather station located at TUC, so you should get an overview of the Weather System installed at TUC.
- Use of “Data Dashboard for LabVIEW” for Monitoring of Weather Data. This application is available for Windows 8, Android and iOS.
- Design and create specifications for a Windows 8 Metro application for communication and presentation of weather data.
- Implementation of Windows 8 Metro application for communication and presentation of weather data.
- Visual Studio 2012, C# and LabVIEW 2012 will be used as tools and languages in this project.
- Use of Wireless Technology such as Wi-Fi and ZigBee
- Deployment of the Application on the Windows Store.
- Delivery of written report following guidelines from the faculty

Task background:

Windows 8 has just been released in the winter 2012. The new thing about Windows 8 is that it will work both on ordinary computer as well on tablets. Another thing is the new user interface called “Metro”.

The first feature you notice is the re-imagined Windows 8 UI. Also called the Metro UI or Modern UI at various points in development, the new layout creates a clean and modern look with large and often live-updated application tiles, similar to the functionality of gadgets in Windows 7. Only apps built for Windows 8 have these live tiles. You can get these new apps through the new Windows Store only. Applications previously built for Windows 7 still appear as tiles on the new Start screen but instead appear as static tiles to the right of the live tiles for Windows Store apps. Scrolling to the right in the Start screen reveals these app tiles.

Student category: SCE students

Practical arrangements: None

Signatures:

Supervisor (date and signature):

Students (date and signature):