

Software application for ZHAW wind tunnel

At the Center for Aviation in Winterthur, a part of the Zurich University of Applied Sciences (ZHAW), a wind tunnel called ALFA (Aerodynamische Lehr- und Forschungsanlage) is being developed mainly for educational purposes.

In a previous project work, a concept for the software for the ALFA wind tunnel was written. The application must be able to control the actors of the wind tunnel, i.e. an axial fan, which is used to produce wind and two motors, which are used for the positioning of the models. There are several sensors in the wind tunnel which provide the measurement data. The application must be able to receive the measurement data and display them graphically.

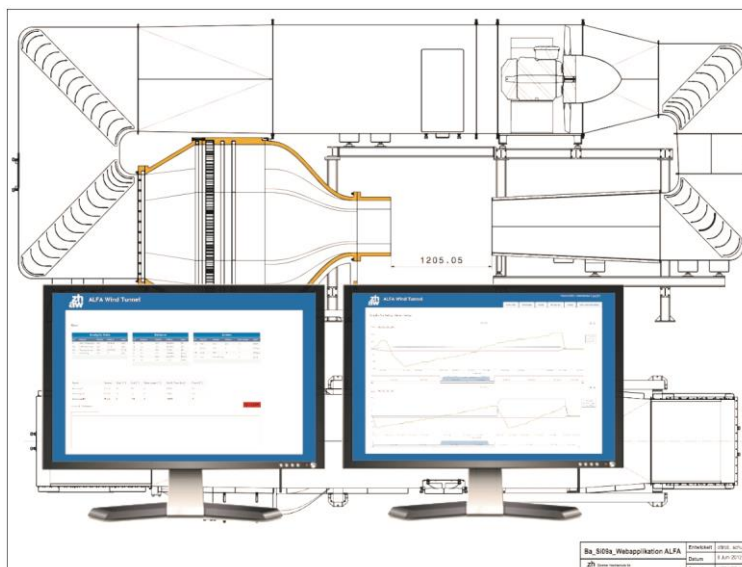
The scope of this bachelor thesis was to implement the software for the ALFA wind tunnel based on the previously defined concept. To meet all defined requirements of the concept was hereby the set goal.

We decided to develop a web application instead of a desktop application. The reason for this decision was the request to be able to control the ALFA wind tunnel remotely. The result of the work is a server-side web application which has been implemented with the programming language C# and the ASP.NET platform. The user can connect to this web application using any common JavaScript enabled web browser.



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In the background a drawing of the wind tunnel is illustrated. On the two monitors the web application is displayed.