1. **Authoring Tool (AUTHOR)**

We have developed a mobile prototype that supports teaching computer literacy skills to Deaf people, using South African Sign Language (SASL) as the medium of instruction. We support Deaf people learning computer literacy skills using the International Computer Driving License (ICDL www.icdl.org.za) approved curriculum and e-learner developed by Computers 4 Kids (www.computers4kids.co.za). We now have a XML specification that is used to structure lesson content and is generated by the content authoring tool. The XML specification was an abstraction of the hierarchical structure of the e-learner manual. The mobile client uses the XML specification and displays the e-learner contents as SASL videos and images.

Your authoring system will be PC based.

Before recording the SASL videos, we need a conversation script. The script details the instructions, in bullet point form, for the lessons. To generate the conversation script the original instructions of the lessons are first written down. The teacher then abstracts the lesson content by ensuring that instructions have one task or a single explanation per bullet point. Multiple instructions must be broken down into single tasks and single explanations and computer terminology explained further in detail. In some cases synonyms for complex terms must be found.

Once the assets (SASL videos, images, lesson texts etc.) are created the system will manage them. For SASL videos and images to be meaningful, they need to be organized in a logical manner that reflects the e-learner lesson structure. We use Universal Resource Locators (URLs) that would point to the location where the resource is stored.

There is already a simple pilot authoring system that you will be using as a starting point. It uses drag-and-drop features to add lesson resources (videos and images) to the placeholder squares that represented the lesson description, task description and task steps. Once a lesson is created and lesson resources added, it can be previewed to view the lesson in sequential order from the beginning. The lesson is then added to a unit and a course before saving and exporting the course. Exporting the course generates the XML data structure that then consumed by the mobile prototype.

![Previewing a lesson on the current pilot authoring system.](image)

Your job will be to make this system more usable and very much more robust and flexible. You may have to invent a new backend for the system. This project is for 2–3 people and you will not be working directly with DCCT staff, only with Meryl Glaser.