Background

This document contains the original VAC specification that the team used initially to design a working prototype produced using Ning, a social network development application. This functional prototype included all of the major elements in the specifications.

During the summer and fall of 2011, Google released a beta version of Google+, which is a competitive product to offer social networking features, similar to Facebook and Twitter, with the additional benefit of offering high quality audio and video communication.

It is this Google+ video chat capability that differentiates it from Facebook and Twitter, especially in the deaf community because of the ease of sign communication. The feature is called “Hangouts” and enables a group of participants see and hear the conversation of members of a circle “hangingout”. One person “has the floor” at a time, and their video display is largest among the group of video windows displayed; this person is given the floor using the traditional telepresence practice of switching the display to whoever is talking the loudest. This of course is a problem for deaf persons, who typically don't sign during such a meeting. When sound was not being used, Google+ was not able to determine who should be in the large window. Recognizing the concerns of the deaf community, Google+ engineers made it possible for sign language users to hit shift+s to take control of the display. In order for this to function correctly, the audio capability on the users computer must be on mute. This sensitivity to deaf concerns and the full feature set of Google+ has made it very popular in the deaf community.

However Google+ does not have the management and control that the Ning prototype can provide. Whether the system can effectively be used by the Alliance is yet to be determined.
Social Networking Design Parameters  
November 9, 2009

Goal:
To use social networking technologies to provide a platform for supporting students with a hearing loss enrolled in STEM majors.

Objectives:
1. Provide a venue for discussion between STEM student and interested parties, 24/7. This could be one to one private conversations or shared postings.
   a. Allow for creation of communities or special interest groups among users with similar interests.
2. Provide an array of access services for students with a hearing loss enrolled in STEM majors.
   a. Deaf mentors
   b. Remote interpreting
   c. Remote speech-to-text captioning
   d. On-line speech and hearing services
   e. On-line tutoring
   f. On-line notetaking
   g. On-line advising
   h. Etc.
3. Provide a clearing house of resources to support students with hearing loss enrolled in STEM majors
   a. Bibliography of STEM text books and other materials
   b. Links to online materials
   c. Access to previously used tutorial information
   d. Access to existing captioned media in STEM areas
   e. Links to organizations/networks supporting STEM students with a hearing loss.
   f. Provide an archive of support materials and references.
   g. Etc.
4. Develop online, open source dictionaries for use by speech-to-text captionists and interpreters.
   a. Downloadable dictionaries for speech-to-text captionists for STEM courses.
   b. Viewable ASL dictionaries for STEM courses.

Technical requirements:
1. Applications should be fast, dependable, free, and work on popular platforms.
2. All applications should be fully accessible for groups (including visually impaired) and conform to universal design principles.
3. Possess both synchronous and asynchronous features.
4. Pass the test of university firewalls for social networks
5. Function even with slow connection speeds often available at home or in rural areas.
6. Monitor participation and membership to ensure appropriate and legal/copyright use.
7. Etc.

Special Considerations:
1. Design to meet the specific communication needs of the user(s):
   a. Speech
   b. Captioned
   c. ASL
   d. Any combination of these.
   e. Etc.

Probable audiences:
1. Students with hearing loss
2. STEM faculty
3. Support service coordinators
4. Interpreters
5. Speech to text operators
6. Academic support staff
7. Tutors
8. Note takers
9. Speech, language, audiology professionals
10. Vocational rehabilitation professionals
11. Friends
12. Etc.
Ning Virtual Academic Community Prototype

The Ning prototype of the VAC was developed as a model of the key functions deemed necessary for the application to be successful.

Main Screen
Remote Services Screen
Local Services

NTID Virtual Alliance

All Pages  My Pages

LOCAL SERVICES

It's not clear what the best way to arrange this would be...geographically? By university? How many locations actually provide local services to students? Does it make sense to provide directories, links, etc. or is this too big a category for the alliance site to try to maintain?

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Discussions
Google+ Virtual Academic Community Prototype

The introduction of Google+ in 2011 afforded the project team the opportunity to compare the features of this newly designed social network with the specifications of the Virtual Academic Community System. Although there are some challenges, the initial testing of the prototype revealed many of the features of Google+ could satisfy the requirements of the VAC. Of special significance is the ability to use the Google+ Hangouts for video conferencing, which within the RIT and local Rochester Road Runner systems provided very clear and smooth video communication, sufficient for sign language.

Main Screen
Deaf STEM Stream in Google+

Virtual Academic Community
A Virtual Academic Community for Deaf and Hard-of-Hearing College Students in STEM Majors

Here is a prototype of our project page

Meeting is going well today!
Michele and Kathy are up on Google+

At least 36 schools nationwide are combining teacher-led lessons with computer-based lectures and exercises using a software program based on Salman Khan's popular YouTube lessons.
“Circle” or Group of VAC STEM Participants
Video “Hangouts” in Google+
Google+ Video Hangout and Viewing YouTube Video