

Chapter 11

Point-and-Chat®: Instant Messaging for AAC Users

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ABSTRACT

Point-and-Chat®, most simply, is the first software for Instant Messaging with a built-in screen reader, designed to be used in conjunction with Augmentative/Alternative Communication (AAC) devices. For many AAC users, especially those who have difficulty reading and writing, an AAC device is the primary or only way they can communicate with other people. This communication is primarily one-on-one and face-to-face. The goal of *Point-and-Chat®* is to take the skills that an AAC user has in producing the spoken word and provide scaffolding that will enable the AAC user to use those skills to communicate with the written word. The primary impediment to effective use of *Point-and-Chat®* by AAC users appears to be a lack of appropriate text-chat vocabularies for poor readers, including vocabulary strategies to re-establish conversations when the conversational thread has been lost.

INTRODUCTION

Point-and-Chat®, most broadly, is software for communicating via electronic text (e.g., IM, Short Message Service (SMS) text messaging, and e-mail). It is specifically designed for people who can see and hear, but cannot read or who are having difficulty reading. For non-readers and poor readers, Point-and-Chat® includes a built-in screen reader so that received messages can be read aloud by a

synthesized computer voice. The built-in screen reader includes patented Point-and-Chat® features and other design choices that support people with cognitive limitations and multiple disabilities. For non-writers, Point-and-Chat® uses text messages created from already-familiar picture-based AAC software such as DesktopChat® from Saltillo Corporation (2008-2009).

This chapter details the design choices and user interfaces used to reduce cognitive load and addresses the growing importance of instant messaging (IM)—including both the challenges and

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opportunities that IM presents to AAC users, especially those with multiple disabilities, reading difficulties, or cognitive limitations. It will become evident why it is important for AAC users (and even non-readers) to learn how to use IM and other electronic messaging, and how the interface design choices make Point-and-Chat® IM easy to learn. This chapter presents the results of a pilot study with Point-and-Chat®—funded in part by the National Center for Technology Innovation (NCTI)—and describes the avenue for further research that the study suggests.

THE IMPORTANCE OF COMMUNICATING VIA INSTANT MESSAGING AND ELECTRONIC TEXT

The use of electronic text is increasingly ubiquitous—and not just among contemporary high-school students. It is becoming essential for many people across all walks of life, even if these people don't write for a living. People who cannot use e-mail (and increasingly texting and IM) are becoming progressively more isolated. E-mail, IM, and texting are even replacing telephone and face-to-face communications for many, even to the point of texting each other when in the same room, such as during committee meetings.

It is not just that electronic text communication is replacing verbal and written communication in familiar settings. In addition, e-mail, IM, and text messaging form the backbone of new opportunities for socialization, such as social networks and other online communities. Perhaps surprisingly, even though computers are frequently not so accessible to people with disabilities, communication using electronic text offers special advantages for AAC users.

A brief exposition of the omnipresence of electronic communications will provide additional perspective. Most Americans use the Internet, in fact, 73% of all American adults use the Internet

and 88% of Americans aged 12-29 use it. Most Americans use e-mail (90% of all Internet users). Most young adults use IM (62% of online young adults, aged 18-27). Half of online young adults use IM as much as or more than e-mail (Pew Internet & American Life project, 2009). For a student or young person who wants to communicate with peers, it is becoming increasingly important to be able to communicate via electronic text—and IM is just as important, or even more important, than e-mail.

The explosion in communication technologies has certainly helped AAC users conduct face-to-face communications, but otherwise they have remained at a communications disadvantage. Certainly, the development of electronic AAC devices has provided a voice for many individuals who had none. The introduction and improvement of their control interface using dynamic displays and of their vocalization via computer synthesized text-to-speech have exponentially increased the things they can say (manufacturers include but are not limited to Saltillo Corporation, Prentke-Romich, and Dynavox). Improved and more natural sounding voices have made participation in face-to-face conversations more natural as well. However, the synthesized voices, especially when played through the small speakers usually found on these devices, do not always transmit clearly over a telephone. Although some of the devices can be used to create text input for a computer, the user must be literate and tech savvy. In addition, though a few of the devices have specialized built-in SMS messaging or e-mail capabilities, none of them have built-in IM software.

Point-and-Chat® is the first IM software designed specifically for AAC users, and designed to take input from their software and devices. Point-and-Chat® can also send and receive SMS messages and has a companion e-mail program with a similar interface.

Electronic text communication may help AAC users by creating a more level playing field for people with disabilities in general and AAC us-

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