4.3   Chat Screen

The chat screen is produced using a combination of a Java Servlet Page (JSP) file, plus a number of java servlets. The main page is chat.jsp, which makes AJAX requests to servlets to perform tasks, include generating elements to display on the page. AJAX is used as opening the channel is fairly CPU intensive, and so AJAX requests mean that it only has to be done once as the page does not have to be reloaded, closing the channel. It also means that any received messages are not lost if the page is reloaded.
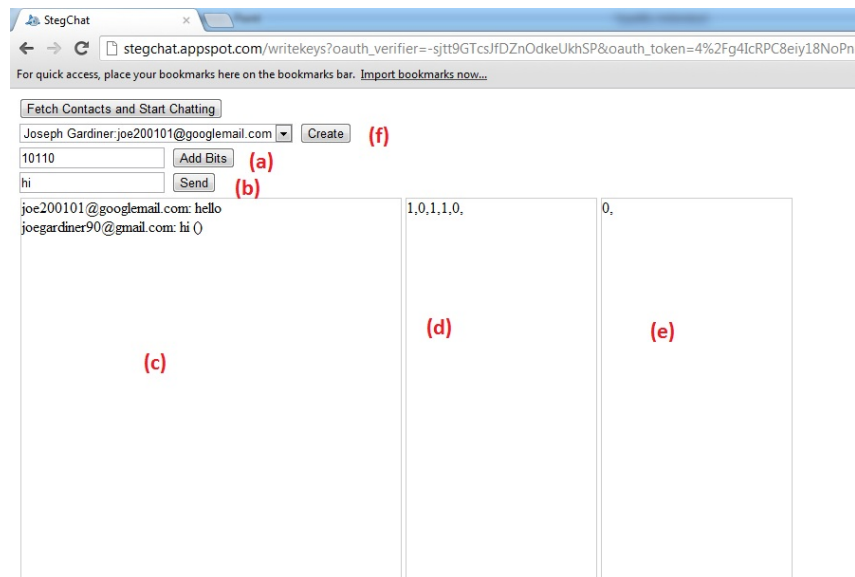

Figure 4.2: Full Chat Window. Components: (a) Form for adding bits (b) Form for sending message (c) Chat Log (d) Bitstream (e) Recovered bits (f)Contact Selection

4.3.1   Contacts Authentication

One of the extra features that was included to make setting up a chat with another person easier is the ability to fetch all of contacts from the users Google Contacts list. Google provides the Google Data API for accessing various pieces of data. There is one overall API, and then this is used in conjunction with more specialised APIs to retrieve the desired data, such as contacts or Googls Docs documents.

There are a number of steps required in fetching the contacts data. The data is retrieved by fetching a feed for the user using a specific URL and a ContactsService object (from the contacts data API). The first is for the user to authenticate the application to access their contacts. This is performed by generating an access token using OAuth authentication; the application forwards the user to a page provided by Google which asks the user to authenticate the application.