

Fig 1.4 Out of focus

In extreme cases, the entire line of text goes out of focus, as seen in the above image. Some people with dyslexia also face the problem of associating a meaning with a word. They are unable to visualize, in their minds, what a particular word means, resulting in total confusion while reading.

Smart Reader is an application we plan to design to help students having reading disabilities read online articles and text files without any difficulty. Traditional text presentation requires physical interaction like zooming and scrolling while reading. Another glitch with traditional text presentation is that there is a need for squeezing a lot of information into a small area. The text is presented as smaller pages that fit the screen or as a long page which implies that the user has to scroll, thereby increasing the physical interaction with the device. In this application the file containing text is streamed in a horizontal fashion. It allows users to set a standard speed whilst reading their documents. Thus users do not need to move their eyes from left to right and can instead focus on one particular point while the words stream from right to left. Users can gradually increase their reading speed once they get accustomed to the current speed. This application can also be used by old people who have problems in focusing and others whose minds get diverted easily.

II. LITERATURE REVIEW

Rapid serial visual presentation is an experimental model which examines the temporal characteristics of attention. The RSVP paradigm entails participants to look at a continuous presentation of visual items which is around 10 items per second. They are all shown in the same place. The targets are implanted inside this stream of continuous items. They are separate from the rest of the items and can be called distracters. The distracters can either be a color change or it can be letters that are among the numbers. Some of the many trajectories that can be associated with RSVP are:

1) Collage-mode RSVP:

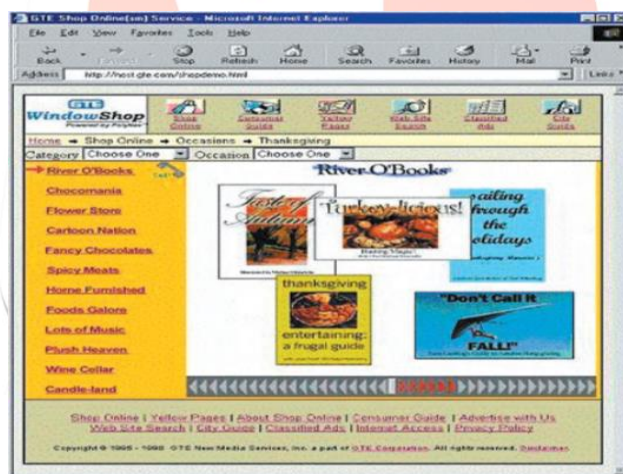


Figure 2.1

Consider an example, where a travel agent places several photographs of locations before you. He arranges as many as possible, until ultimately, all the space on the table has been taken up. Thus, he has no alternative but to place further pictures atop the present ones. Figure 2.1 shows an implementation of Collage RSVP4–6 in the context of an online bookstore. Controls are provided to enable the user to adjust the speed of presentation, to reverse it and, most importantly, to stop it.

2) Floating-mode RSVP:

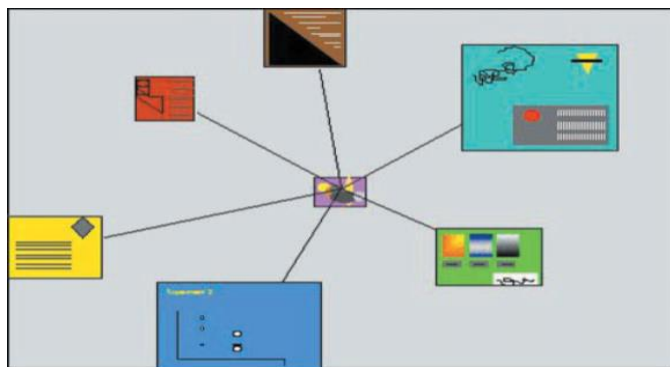


Figure 2.2

With Floating-RSVP one sees each image initially in miniature – and perhaps slightly out of focus – in the centre of the display, after which it moves radially in one of a number of possible directions to the edge of the display, expanding in size all the time (Figure 2.2). This is similar to the situation when an observer sees a signboard from afar, approaches it and can see it closely until it goes out of sight, over his shoulder, as he passes by.

3) Shelf-mode RSVP:

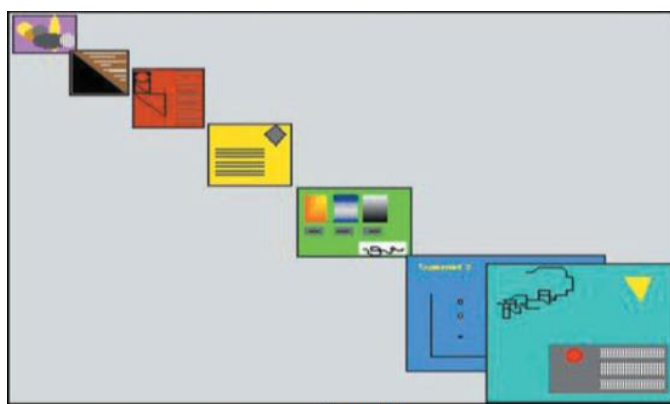


Figure 2.3

Illustrated by Fig 2.3, this mode basically shows the arrangement of images one after the other. The one that has been viewed then moves to the back. Thus, this is a sequence-like mode of display. Here, the initial presentation of an image is 'full size' and located at the lower right-hand corner of the display. It remains there for a while, before moving at constant speed, along a linear trajectory, towards the upper left-hand corner of the display, decreasing in size all the time.

4) Other RSVP modes:

It is not difficult to propose other RSVP modes having different trajectories and other features, but the ones already described above are sufficiently representative to trigger a variety of relevant questions and tentative hypotheses. The thesis is all about an overview of the essentials about reading and readability. The adaptive RSVP format had to be developed, it already existed as an idea but it had to be put into practice. After that adaptation had to be integrated into an application for RSVP on a computer device. Finally, the prototype had to be benchmarked against other presentation formats in a usability evaluation. The work with the assignment can thus be roughly divided into the following three tasks:

Design: Find out how adaptation could and should work on basis of previous studies and evaluations.

Implement: Construct and test an application for reading texts on a computer device that incorporates adaptive RSVP features.

Evaluate: Assess the ability to read using RSVP and other text presentation formats by benchmarking the prototype against other applications in a usability evaluation.

III. PROPOSED SYSTEM

1) ALGORITHM:

Step 1: Retrieve file from the memory

Step 1.1:

Open connection and access the file from the directory

Step 1.2:

if(inputstream !=null)

save string from the file

Step 1.3:

by using a while loop

append text to string builder
convert to string s

Step 2: While(s!=null)

Step 2.1:

Split the sentence into words, and words into letters

Step 2.2:

Display each letter from right to left

Step 2.3:

Display the word

Step 3: Finish

2) Architecture:

The architecture diagram gives an overview of the software used in the system. It provides the services offered to the user and the resources required for the development of the system. In the above diagram, the user can access Smart Reader which is the software used. This software is connected to the database. The database is important for the dictionary, since it maintains an account of every word, it's meaning, and a JPG/GIF image to depict the meaning of the word. The services offered by Smart Reader include the options to pause/continue reading, save an existing file, import a new file as input, adjust speed and use the dictionary for reference while reading.

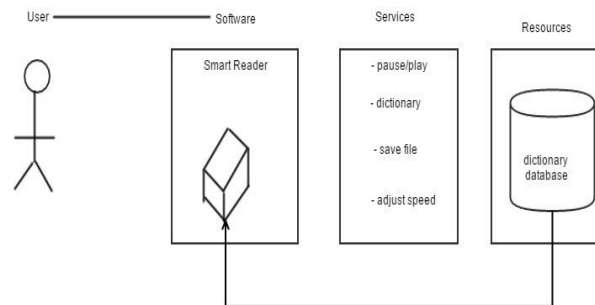


Fig 3.2.1 Architecture Diagram

IV. FUTURE SCOPE

Once the implementation of the proposed model is complete, Smart Reader can be further improved by adding the following functionalities:

- Web mining:

In this project we have a text file as an input which can be modified by taking a html file as an input from the website, in which we can get the data from different html files and can be processed further.

- Bookmark: Users can Bookmark the line they were on, so they can go right back to where they left off from.
- Previous/Next: Users can jump through the stream and view the previous or next word.
- Help Bar: The Help Bar can be used in situations where the user has difficulty using the software, or trouble understanding one/more functionality.

V. CONCLUSION

Thus, in this day and age of digitization, even education and reading have become digital. We have conceptualized this application keeping in mind the requirements of dyslexic students and voracious readers who do not have the leisure of time or are expected to be extremely competitive. We hope our application can be of use to our users to sharpen their comprehension skills and provides a satisfying and fruitful experience.

VI. ACKNOWLEDGMENT

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