



Search ScienceDirect



Advanced search



## Interacting with Computers

Volume 15, Issue 4, 1 August 2003, Pages 539–558



## Towards an improved readability on mobile devices: evaluating adaptive rapid serial visual presentation

Gustav Öquist<sup>a</sup>, , Mikael Goldstein<sup>b</sup>, <sup>1</sup>, **Show more**[https://doi.org/10.1016/S0953-5438\(03\)00039-0](https://doi.org/10.1016/S0953-5438(03)00039-0)Get rights and  
content

## Abstract

Can readability on small screens be improved by using adaptive Rapid Serial Visual Presentation (RSVP) that adapts the presentation speed to the characteristics of the text instead of keeping it fixed? In this paper we introduce Adaptive RSVP, describe the design of a prototype on a mobile device, and report findings from a usability evaluation where the ability to read long and short texts was assessed. In a latin-square balanced repeated-measurement experiment, employing 16 subjects, two variants of Adaptive RSVP were benchmarked against Fixed RSVP and traditional text presentation. For short texts, all RSVP formats increased reading speed by 33% with no significant differences in comprehension or task load. For long texts, no differences were found in reading speed or comprehension, but all RSVP formats increased task load significantly. Nevertheless, Adaptive RSVP decreased task load ratings for most factors compared to Fixed RSVP. Causes, implications, and effects of these findings are discussed.

## Keywords

Mobile usability; Small screens; Readability; Adaptive user interfaces; Dynamic text presentation; Rapid Serial Visual Presentation

## Choose an option to locate/access this article:

Get Full Text Elsewhere

Corresponding author. Tel.: +46-18-471-7006; fax: +46-18-471-1416

<sup>1</sup> Tel.: +46-8-757-3679.

Copyright © 2003 Elsevier B.V. All rights reserved.

## ELSEVIER

About ScienceDirect Remote access Shopping cart Contact and support  
Terms and conditions Privacy policy

Cookies are used by this site. For more information, visit the [cookies page](#).

Copyright © 2017 Elsevier B.V. or its licensors or contributors. ScienceDirect ® is a registered trademark of Elsevier B.V.

RELX Group™

## ▼ Recommended articles

## Reading text presented on a small...

1995, Applied Ergonomics [more](#)

## Improving Readability of an Evalua..

2008, Journal of Nutrition Education and... [more](#)

## Effects of font size, display resolu...

2009, International Journal of Industrial ... [more](#)[View more articles »](#)

## ► Citing articles (24)

## ► Related book content