A Study of the Interactive SVG Framework on PDA

E-mail: 9121375@ mail.dyu.edu.tw

ABSTRACT

With growing popularity and fast development of handheld devices such as PDAs and cellular phones, multimedia presentation on PDA is becoming a new trend in designing interactive PDA applications. However, previous PDA applications are often lacking standard presentation of information. Therefore, they have great difficult to integrate information from different system and they also lack flexibility in presenting multimedia information on different devices. In addition, most PDA systems can not be used as a collaborative environment for users to exchange information and complete their work collaboratively. SVG is a new and open 2D graphics standard. It has all the advantages of XML. In addition, its graphics can be scaled to different size of screen without loss image quality. Currently, the research of SVG on PDA is still in the early stage. Therefore, it is a worthy area to study how to develop an interactive SVG environment for users to learn collaboratively or exchange information. In this paper, we develop an interactive environment that is based on XML open standard and platform-independent language. Our SVG interactive environment will let people use different SVG tools to collaborate their work by using PDA. Our research shows that our approach building for a SVG multi-user interactive environment. In the future, our system will be able to provide a more flexible mobile computing environment for users to learn and interact each other on PDA systems.

Keywords : PDA ; SVG ; XML

Table of Contents

REFERENCES

[1]   ,   CORBA   ,
   , 1998

[2]   ,   Palm OS EPOC WinCE   ,   , 1999

[3]   , Windows CE   ,   6 159 , 1999

[4]   , PDA   ,   , 2000

[5] Palm OS   Windows CE, http://www.yapn.com.tw/news/thread. asp, 2000

[6] Apache'sBatik, http://xml.apache.org/batik.

[7] Badros, G.. J., et. al., " A constraint extension to scalable vector graphics," In Tenth International World Wide Web Conference, Hong Kong, pp.489-498, 2001.

[8] Beca Lukasz. State Management and Message Routing in Collaborative Environments. Master thesis, Syracuse University, 1997.

[9] Berkeley Digital Library SunSITE, " SGML: Standard Generalized Markup Language," http://sunsite.berkeley.edu/SGML/.

[10]Canon, S., " Impact of the development of Internet on EDI," Proc. Of 3rd Int'l Workshop on Community Network, pp. 77-82, 1996.

[11]Chandy, K., et. al. A World-Wide Distributed System Using Java and the Internet. Technical report, Caltech Computer Science, 1996. Caltech CS Technical Report CS-TR-96-0.

[12]Fox, G. C. Architecture and Implementation of a Collaborative Computing and Education Portal, ERDC Technical report, pp. 2-5, Florida State University, 2001.

[13]Fox, G. C., " Portals for Web Based Education and Computational Science," http://newnpac.csit.fsu.edu/users/fox/documents/ generalportalmay00/erdcportal.html.

[14]Gomez, E. J., et. al., " A Broadband Multimedia Collaborative System for Advanced Teleradiology and Medical Imaging Diagnosis," IEEE Transactions on Information Technology in Biomedicine, Vol. 2, No. 3, pp.146-155, 1998.

[15]Gould, M., and Ribalaygua, A., " A New Breed of Web-Enable Graphics:SVG (Scalable Vector Graphics) ," GeoWorld 12(3), pp. 46-48 1999.

[16]Habanero, http://www.ncsa.uiuc.edu/SDG/Software/Haranero/.

[17]Holtman, K., " The Futplex System," Proceedings of the ERCIM workshop on CSCW and the Web, Sankt Augustin, Germany, 1996.

[18]IDC, www.idc.com.sg/Reports/internet_research.html, 2001.

[19]Kantor B., and Lapsley P., " Network News Transfer Protocol: A Proposed Standard for the Stream-Based Transmission of News," RFC 977, U.C. San Diego and U.C. Berkeley, 1986.

[20]Lavana, H., et. al., " OpenDesign: An Open User-Configurable Project Environment for Collaborative Design and Execution on the Internet, " IEEE Intl. Conference on Computer Design, 2000.

[21]Microsoft Windows CE, http://www.microsoft.com/windows/ embedded/ce/default.asp.

[22]Myers, B., et. al., " Individual Use of Hand-Held and Stationary Computers Simultaneously," http://almond.srv.cs.cmu.edu/afs/ cs.cmu.edu/project/pebble s/www/index.html.

[23]Oikarinen, J., and Reed, D., " Internet Relay Chat Protocol", RFC 1459, 1993.

[24]SavaJe XE, http://www.savaje.com.

[25]Shlomit, S. P., and Adi, Y., " Tango: a Hardware-based Data Prefetching Technique for Superscalar Processors," Proceedings of the 29th annual IEEE/ACM international symposium on Microarchitecture, pp. 214-225, 1996.

[26]Tango, http://trurl.npac.syr.edu/tango/.

[27]W3C, " Scalable Vector Graphics (SVG) 1.0 Specification," http://www.w3. org /TR/SVG, 2001.

[28]W3C, " Synchronized Multimedia Integration Language (SMIL 2.0) Specification," http://www.w3.org /TR/smil20, 2001.

[29]W3C, " Extensible Markup Language (XML) 1.0 Recommendation," " http://www.w3.org/TR/1998/REC-XML-19980210.html, 1998.