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## Information Visualization (IV) Application for Information Acquisition based on Visual Perception

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### ABSTRACT

Information Visualization (IV) is a current field that has the potential to develop methods of accessing, processing and managing of information (Chen & Czerwinski, 2000). IV applications are developed as a learning tool due to the technique of IV being capable of improving the understanding process through the use of visuals. In addition, IV applications are also able to manage the several data sources and complex concepts in learning activities. IV techniques are useful for information acquisition and learning activities. Based on the theory of visual perception, this study produces a design of IV application. The design supports a particular understanding of the visual accordance with data of the hadith environment. Balance to the visual design can build a good human perceptual system to understand the concepts and interpret information more easily and accurately. The findings of the study show the good interpretation and the high score of respondents' achievement toward using the application. This result indicates that the contribution of visual perception theory as the design of the IV application can create a better visual perception and enhance the quality and quantity of the information.

### KEYWORDS

Visual, Visual Perception Theory, Information Visualization (IV)

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### References

- [1] Atikullah Hj. Abdullah. (2005). *Rehlah Ilmiyyah dan Kepentingannya: Refleksi Dari Tradisi Para ' Ulama' Hadith Islam*. Pulau Piang: Penerbit USM.
- [2] Borner, K., Chen, C. & Boyack, K. (2003). Visualizing knowledge domains. In B. Cronin (Ed.), *Annual Review of Information Science & Technology*, 37, pp.179-255.
- [3] Card, S. K., Mackinlay, J. D., & Shneiderman, B. (1999). *Readings in information visualization: Using vision to think*. San Francisco, CA: Kaufmann.
- [4] Chen, C. & Paul, R. J. (2001). Visualizing a knowledge domain's intellectual structure. *Computer*, 34 (3), 65-71.
- [5] Chen, C. (2003). Visualizing scientific paradigms: An introduction. *Journal of the American Society for Information Science and Technology*, 54(5), 392-339.
- [6] Chen, C. (2004). *Information visualization: Beyond the horizon* (2nd ed.). London: Springer.
- [7] Duncan, J., & Humphreys, G. W. (1989). Visual search and stimulus similarity. *Psychological Review* (96)3, 433– 458.
- [8] Healey, C. G. (1995). Choosing effective colours for data visualization. *Proceedings Visualization '95*, pp. 263– 270.

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- [9] Healey, C. G. (2001). Formalizing artistic techniques and scientific visualization for painted renditions of complex information spaces. *Proceedings International Joint Conference on Artificial Intelligence (IJCAI 2001)* (pp. 371– 376).
- [10] Healey, C. G. (2007). Perception in Visualization. Retrieved from <http://eeeeleranspace.org/articles/InstructionalDesign.htm> [9 Julai 2011]  
[http://en.scientificcommons.org/xavier\\_polanco](http://en.scientificcommons.org/xavier_polanco) [27Oktober2008]  
<http://www.csc.ncsu.edu/faculty/healey/PP/index.html>.  
<http://www.personal.psu.edu/faculty/s/jsjm256/portfolio/kbase/IDD/ISDModels.html>. [3 Mac 2011]
- [11] Hui, B. (2002). Developing and evaluating a document visualization system for information management. Ph.D Thesis, University of Toronto.
- [12] Ishak Haji Suliaman. (2007). Isnad Hadis sebagai etika maklumat Islam. Dlm. Ishak Haji Suliaman, Fauzi Deraman, Mohd. Muhiden Abd Rahman & Abdul Karim Ali, *Autoriti Hadis menangani gerakan antihadis* (hlm. 47-59). Kuala Lumpur: Penerbit Universiti Malaya. Su-liaman???
- [13] Jul'esz, B. (1984). A brief outline of the texton theory of human vision. *Trends in Neuroscience*, 7(2), 41– 45.
- [14] LaConte, R. T. (1984). Communication skills for the future. *Journal of Technology Teacher*, 44(3), 4-5.
- [15] Lamping, L., & Rao, R. (1994). Laying out and visualizing large trees using a hyperbolic space. *Proceedings of the ACM Symposium on User Interface and Technology (UIST' 94)*, (pp. 13– 14).
- [16] MacKinlay, J. D. 1986. Automating the design of graphical presentation of relational information. *ACM Transaction on Graphics* 5(2): 110-141.
- [17] McCormick, B. H., DeFanti, T. A., & Brown, M. D. (1987). Visualization in scientific computing: Report of The NSF Advisory Panel on Graphics, Image Processing and Workstations.
- [18] McGriff, S. 2001. Instructional systems design models. <http://www.personal.psu.edu/faculty/s/jsjm256/portfolio/kbase/IDD/ISDModels.html>. [3 Mac 2012]
- [19] McGriff, S.J. (2000). *Instructional Systems*. College of Education, Penn State University.
- [20] Mergel, B. (1998). *Instructional design & learning theory*. In *Educational communications and technology*. University of Saskatchewan.
- [21] Nawer Yuslem. (2003). *Ulumul hadis*. Jakarta: Penerbit Mutiara Sumber Widya.
- [22] Norasikin Fabil. (2009). *Aplikasi Teknik Graph View dalam Pemvisualan Maklumat Sa-nad Domain Ilmu Hadis*. Ph.D Thesis. Universiti Kebangsaan Malaysia, Bangi.
- [23] Polanco, X. & Zarti, A. (2008). Information visualization, State of the art part C: WP9, EICSTES Project-IST-1999, 2008.
- [24] Rheingans, P. & Ebert, D. S. (2001). Volume illustration: Nonphotorealistic rendering of volume models. *IEEE Transactions on Visualization and Computer Graphics* 7, 3 (2001), 253– 264.
- [25] Siemens, G. 2002. Instructional design in E-learning. <http://eeeeleranspace.org/articles/InstructionalDesign.htm> [9 Julai 2010]
- [26] Small, H. (2000). Charting pathways through science: Exploring Garfield's vision of a unified index to science. In B. Cronin & H. Atkins, H. (Eds.), *The web of knowledge: A Festschrift in honor of Eugene Garfield* (pp. 449-473). Medford, NJ: Information Today.
- [27] Spence, R. (2001). *Information visualization* (2nd ed.). Harlow, UK: Addison-Wesley.