

## Selected Publications

**d'Auriol (2017)** Optical Pipelined Multi-Bus Interconnection Network Intrinsic Topologies. ETRI Journal, In press (SCI)

**d'Auriol (2017)** High Band-width Flexible Interconnections in the All-Optical Linear Array with a Reconfigurable Pipelined Bus System (OLARPBS) Optical Conduit Parallel Computing Model, J Supercomput, 73(2) Feb., pp. 900-922 (SCI)

**d'Auriol (2016)** Engineering Insightful Visualizations, J Visual Lang Comput, 37 Dec., pp. 12-28 (SCI)

**d'Auriol (2016)** All-Optical Linear Array with a Reconfigurable Pipelined Bus System (OLARPBS) Optical Bus Parallel Computing Model, J Supercomput, 72(2) Feb., pp. 753-769 (SCI)

**d'Auriol (2012)**, Serviceable Visualizations, J. Supercomput, 61(3) Sept., pp. 1089-1115 (SCI)

**d'Auriol and Roldán (2009)**, An Optical Power Budget Model for the Parameterized Linear Array with a Reconfigurable Pipelined Bus System (LARPBS(p)) Model, JPDC, 69(10) Oct., pp 815-823 (SCI)

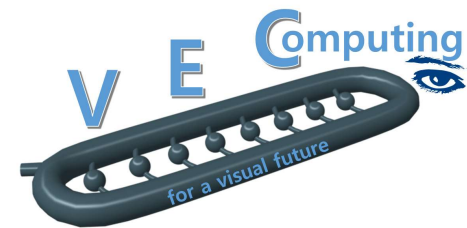
**d'Auriol (2009)** The *Systems Edge* of the Parameterized Linear Array with a Reconfigurable Pipe-lined Bus System (LARPBS(p)) Optical Bus Parallel Computing Model, J. Supercomput. 28(2) May, pp 183-209 (SCI)

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# Visual Enabled Computing

Visual Enabled Computing – V.E. Computing – is Dr. d'Auriol's research group. We investigate, research and develop all aspects pertaining to present and future visualization-related applications including hardware convergence and hardware and software convergent technologies aimed at time, resource and mission critical activities in a high-speed and high-density visual information acquisition environment.



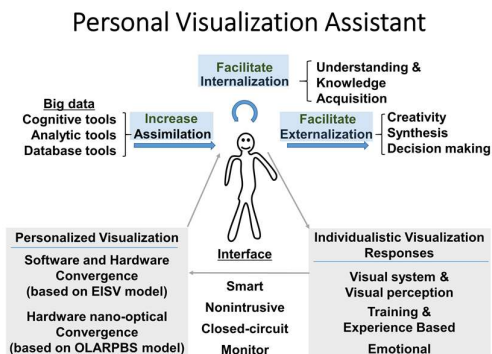
For a visual future

## Research and Development

### Personal Visualization Assistant

An individualistic and personalized visualization approach takes into account specific individualistic visual factors so as to deliver personalized visual information in time, resource and mission critical activities.

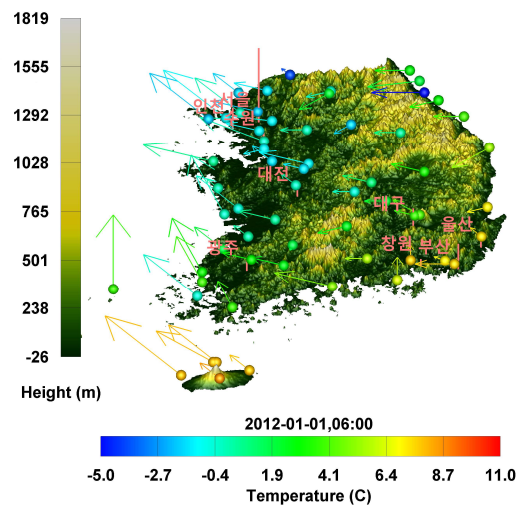
- 1) Facilitate information assimilation, i.e., increase information flow rate from information sources to individuals
- 2) Facilitate internalization, i.e., increase understanding and knowledge acquisition via visual learning and insight.
- 3) Facilitate externalization, i.e., support creativity, synthesis and decision making.



Exhibitions (2016,2017)  
International Military Science and  
Technology Fair  
COEX, Seoul Korea

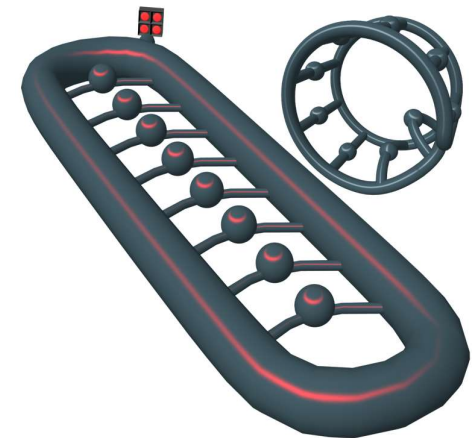
### Engineering Insightful Serviceable Visualizations

A question and answer, component based approach to designing effective visualizations. Visualizations are composed of components, each of which addresses specific answers to questions. (Below: temperature, wind, terrain, city, population and legend components adhering to EISV design, colors optimized for projection display)



### OLRAPBS Vis Compute Engine

The OLARPBS is a high-speed, high-bandwidth, all-optical, massively parallel computer architecture designed to meet the needs of future time, resource and mission critical activities in a high-speed and high-density visual information acquisition environment. Its exa-to-zetta bps total bandwidth, giga bit optical register storage capacity, flexible reconfigurable interconnect and convergence technologies makes it an ideal architecture to invest in.



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