From the Editor

Spatial Interfaces

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As a regular feature of *IEEE Computer Graphics and Applications*, the Spatial Interfaces department focuses on the user interface challenges that appear when humans interact in the space where the flat, 2D, digital world meets the volumetric, physical, 3D space we live in. This considers both spatial input and output, with an emphasis on the issues surrounding human and system interaction. Based on the recent advances in 3D technologies, spatial interaction is now more relevant than ever.

Powerful graphics engines and high-resolution screens are now ubiquitous in everyday devices, such as tablets and mobile phones. Moreover, new forms of input, such as multitouch, finger, and body tracking technologies have also become more easily available. In this environment, spatial interfaces are transitioning out of the research community and game industry. More and more commercial 3D systems with spatial interaction capabilities exist, many priced at the consumer level. Thus, this department covers fields such as virtual environments; augmented and mixed reality; and multitouch, tangible, and mobile computing interfaces. Advanced tools and techniques that are helpful for spatial interfaces are also welcome.

Article submissions should offer technical design concepts for nontraditional input interfaces and displays. The incorporation of novel hardware, new methods for using existing or traditional input or output devices, and performance measurements of interfaces will all be important contributions to the department. Furthermore, descriptions of applications that drive the needs for these interfaces are also appropriate. We strongly encourage an emphasis on lessons learned from practical experience for articles focusing on an application, particularly those in which spatial interfaces are in use outside computer science laboratories. We also invite surveys of new research areas or emerging trends in spatial interfaces.

Criteria

Department articles will come from both general submissions and solicitations by the editors. All articles are reviewed by the editors, *CG&A* staff, and potentially editorial board members, and the department editors may also solicit extra reviewers if appropriate.

Submissions to the Spatial Interfaces department must meet these criteria:

- *Unique or novel*. The technical designs or algorithms should be innovative in and of themselves or through their use in new applications.
- *Accurate*. Articles must be technically correct, although given the length restrictions, full detail might not be included.
- *Writing style*. We strongly prefer an active scientific writing style.

A typical outline for *CG&A* department articles will follow this format:

1. Introduce the field for which the interface is used (or proposed). The introduction should

Editors' Note

For the From the Editor article in this issue, we've asked our new *CG&A* editorial board members and coeditors of the Spatial Interfaces department, Frank Steinicke and Wolfgang Stuerzlinger, to tell us about their vision for the department. We'd also like to thank outgoing Spatial Interfaces department editors Mark Livingston and Bernd Fröhlich for their many years of service.

quickly get to the article's main point.

2. Explain the technical concept behind the interface and include images whenever possible.
3. Describe results. This may include lessons learned, performance measurements, a (pilot) user study, and/or images demonstrating the interface's value. Avoid repeating information or summarizing all or parts of the article.

Although articles may mention equipment and products by name, and application notes from product manufacturers can serve as a basis for articles, it is neither sufficient nor appropriate for articles to be, in effect, simply product descriptions or advertisements.

Submission Length and Specifications

CG&A department articles should run four to six published pages (3,200 to 4,800 words). Please note that figures and tables each count as at least 200 words, and articles may contain up to 10 references. Article files should also include an abstract and keywords for use in the IEEE Computer Society digital library as well as specific author contact information (names, phone numbers, and email and Web addresses). For more details, see the general style guidelines for *CG&A* at www.computer.org/web/peer-review/magazines. *CG&A* staff will edit articles as necessary to fit the available space and conform to the magazine's style.

Lastly, authors must ensure that they have permission to publish images in print and online in the Computer Society Digital Library (CSDL). If you did not personally create an image, you must acquire permission from the image's copyright owner (which may not be the image author). We cannot publish an image without explicit, written consent.

Send submissions to coeditors Frank Steinicke (frank.steinicke@uni-hamburg.de) and Wolfgang Stuerzlinger (w.s@sfu.ca).

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