# geo-dir-ect-ions

This first 2008 issue of the *ACSM Bulletin* offers some idea of the magazine's content in the remaining issues of the year. We'll do a lot of "scoping," and measuring, and scanning, and modeling, and mapping—on Earth and in space. Why bring the distant extremes of our galaxy onto the pages of a professional magazine for surveyors and cartographers? There is certain amount of pride involved here—and a recognition of the scientific and technological links between the geo- and space sciences.

Scientific observations—of distance, height, depth, electromagnetic forces, temperature—have led to revelations that have greatly improved our understanding of Earth and its life forms. Experimentation, modeling, and visualizations made on and of our planet are constantly providing clues to searches for life on other planets. Mankind will not rest until the question of whether we're the only highest living form in the universe is resolved.

But the give-and-take between the geo- and space sciences is not one-way. If data obtained on Earth have aroused curiosity and interest in extraterrestrial surveying and mapping, then the technology that sprang from taking measure of the universe has yielded tools today's geospatial professionals can't do without. Technology transfer has accelerated over the past half-a-century, improving the ability to "scope" the Earth. The impetus for the transfer? What else, but a driving ambition to be first in space.

The "cosmic race" that ensued after Sputnik demanded that we have a means of calculating credible results from the plenitude of spatial observations being made on, above, and beyond Earth. Enter the computer and a world of models and maps changing right before our eyes with each new data coming in from the field.

The computer, big or small, ugly or sleek, and with super crunching powers, is not done improving our reach into the world of observations; and, so, it deserves keeping an eye on. The same goes for satellites and GPS receivers. We need more satellites to go up, and we need our receivers to be able to receive signals from various constellations of satellites.

The newly minted Webb Space telescope and interactive image processing software for editing, display, and analysis of data obtained in space are good candidates for attention as well. Most certainly we'll look into "space geodesy," an area which, to some, is the future of surveying on land.

Another must-have will be wireless positioning. For distance measurement and position location capabilities have become a necessary adjunct to communication. Location services received a big boost in 1995 with the FCC's directive expanding 911 calls to cellular telephony. Currently, radio frequency identification (RFID), wireless local area network (WLAN), and wireless personal area network (WPAN) would be unthinkable without wireless-enabled communication over long distances. The surveyors' tool, GPS, is the best known and most widespread example of locating objects and people by applying the fundamental principles of distance measuring.

The development of wireless networks, spatial positioning methods (GPS), RFID, and mobile computing systems (e.g., PDAs that support mobile input and output devices) have led to a revolution in populist map-making. We've come full circle on technology—at least for a year or so. But we'll make good use of it, for the data surveyors collect and cartographers transform into maps are, figuratively and for real, in the eye of the biggest controversy of our times—the heated scientific and political debate on global warming.

Every step forward has a past; when appropriate, we'll bring the past forward to provide context and find an act, a finding that might have been the impetus for a scientific achievement. But mostly, we will focus on you, our members and subscribers, because your work involves all that we'll be writing about on the pages of this magazine in 2008.

Ilse Genovese
The Editor