**Dark Matter**

In the 1930s, astronomers discovered that familiar visible matter (stars, planets, gas, dust, etc.) constitutes only a small fraction of the universe. A previous unknown class of invisible “dark matter” was found to be five times larger!

Today, when corporate chief information officers (CIOs) think about corporate IT, they think about traditional central IT—transaction processing systems and their derivatives, such as ERP and management information systems. Although they know that something called end user computing exists, they tend to believe that EUC is simply a way for users to download data from central systems and then massage the data. The very term “end user” was created to indicate a distinction between IT developers or maintainers on the one hand the “end” or final users of data from central IT on the other.

Compliance regulations, however, recently forced organizations to take a close look at the realities of financial reporting processes and other sensitive business processes. What companies found were spreadsheets—often webs of 200 or more spreadsheets. These spreadsheets, furthermore, contain thousands of root (not copied) formulas.

How large is spreadsheet development, compared to centralized IT? We have no hard data, but we can do some rough calculations. According to Bureau of Labor Statistics data, there are 16 management, business and financial specialists for every application software engineer and programmer. If professionals are added to the picture, the ratio rises to 48 to 1. Studies at the Spreadsheet Engineering Research Program at Dartmouth suggest that managers spend about a quarter of their time on spreadsheets. Even if they spend only a small fraction of that time developing spreadsheets, this is an enormous amount of development. In turn, programmers only spend about a third of their time doing actual programming. Any way you analyze this data, it appears that most units of programmed business logic are created by non-IT professionals, using spreadsheets.

**Dark Energy**

In 1998, astronomers began to realize that the expansion of the universe was accelerating rather than slowing down as expected. Our massive universe was being pushed to expand by previously unsuspected “dark energy,” which makes up 74% of the universe.

Similarly, spreadsheets may be the dark energy of the corporate IT. Spreadsheets and other end-user tools appear to have empowered IT to expand far more rapidly than central IT has done.

**The Papers**

The minitrack has six papers. The first three deal with traditional spreadsheet error research issues. The last three deal with a growing research area—the complexities of using and managing spreadsheets in the real world.

*Revising the Panko–Halverson Taxonomy of Spreadsheet Risks (Panko)*

*Errors in Operational Spreadsheets: A Review of the State of the Art (Powell, Baker, and Lawson)*

*The potential of Example Driven Modelling for Decision Support Spreadsheets (Ball and Thorne)*

*Implementing GIS in a Spreadsheet Model: What, Why, and How (Keisler, Blake, Wagner)*

*How Spreadsheets Get Us to Mars and Beyond (Hihn, Lewicki, and Wilkinson)*

*Spreadsheets in Team X: Preserving Order in an Incoherently Chaotic Environment (Warfield, Hinh)*