Charles Symons, Founder and Past President of COSMIC reviews the current state of the most modern software sizing method at June 2012.

COSMIC Takes Off!

The Common Software Measurement International Consortium was formed in 1998 to develop new ways of measuring software so as to help improve project performance measurement and estimating. The method definition, first published in 2000, was based on fundamental software principles and designed to be applicable to business, real-time and infrastructure software.

New methods and technologies, if they succeed at all, typically evolve through classic phases of adoption, first by 'innovators', then by 'early adopters', and then the 'early majority'. The transition to this third phase usually sees the beginning of explosive growth in adoption. This seems to be where we are with the COSMIC method. The evidence?

- The current English version 3.0.1 of the 'Measurement Manual', in which the method is defined, was loaded to www.cosmicon.com in September 2009. After two years the number of downloads had reached around 650. But in the last six months (to mid-June) the number has nearly tripled to 1915
- The Measurement Manual has now been translated into nine languages and three more translations (into Polish, Russian and Turkish) are well advanced. Summing over all languages the total downloads are now nearly 5000 just from the 'cosmicon' site, with many others from other national Software Metrics Association sites. Which are the most down-loaded other language versions? French and Chinese.

What I personally find most rewarding and exciting are the ways that the method is being taken forward into new areas just in the last 2 – 3 years. Some examples:

- Modern cars contain dozens of Electronic Control Units (ECU) to control the engine, air conditioning, lighting, etc. Renault holds the specifications for the software embedded in the ECU chips in tools such as Matlab Simulink. They can now measure the COSMIC size of the software automatically (their rules are available on 'cosmicon') and use the data to manage the price/performance of its external ECU suppliers.
- Saab, when it was part of General Motors, demonstrated it that could use COSMIC functional sizes to accurately predict ECU memory sizes, enabling them to order the chips much earlier in vehicle development than previously
- The Polish national Social Security Department, after using the COSMIC method for only about one year, has been able to establish price/performance norms and to make cost-savings from its external suppliers who maintain and enhance their main systems
- We published a 'Guideline for the use of COSMIC FSM to manage Agile projects' just nine months ago and already there have been almost 600 downloads. Data from Canadian COSMIC-measured projects, mostly in banking and insurance, show 25% to 67% improvements in productivity of projects using Agile methods over traditional waterfall methods

It's hard to get organizations to acknowledge publicly their use of COSMIC. Our list of known users shows about half are software houses. And of all the 22 countries that have people who have passed the COSMIC certification exam, the country with by far the largest number of qualifications (113) is India, mostly working for outsourced software suppliers

The United States Government Accountability Office has recommended using COSMIC amongst other methods in its 'Cost Estimating and Assessment' guide for developing and managing capital programs.

Yes, COSMIC is really taking off!

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