The BIOS Initiative - Open Source Biotechnology is Born

In a publication today in the prestigious scientific journal, Nature, a team at CAMBIA in Canberra unveils the ‘kernel’ of the world’s first ‘explicit open source’ biotechnology toolkit. These tools, and the precedent they establish, will allow the public-sector, small to medium enterprises and even large firms worldwide to explore new business models and begin a new era of transparent and cost-effective innovation in life sciences.

The technologies include TransBacter, a new method for transferring genes to plants, and GUSPlus, a new way of visualizing where these genes are and how they function. “These tools are seeding a growing movement – the BIOS Initiative – that will enable researchers, even in the poorest countries in the world, to be partners in the choice and development of the crop improvement technologies best suited to their own priorities”, says Richard Jefferson, founder and CEO of CAMBIA and Adjunct Professor at Charles Sturt University (CSU). “Most importantly, these new tools are provided under a new licensing paradigm that ensures that they are improved, shared and retained as a public resource.”

Today also sees the launch of BioForge (www.bioforge.net), an online collaborative research platform for biological innovation, developed in partnership with CollabNet Inc (www.collab.net). In the tradition of open source software, BioForge makes it possible for scientists to work together to craft new, deliverable technologies within a “protected commons”.

“BioForge is a hands-on, evolving tool kit to make things happen. BioForge is about sharing capabilities and building communities of innovation to tackle the challenges of global health, poverty and hunger. These problems are best solved by empowering untapped resources – the countless creative people who are currently marginalized”, says Jefferson, an influential scientist who in 2003 was named as one of Scientific American’s 50 Top Technology Innovators and is a Fellow of the Schwab Foundation for Social Entrepreneurship.

Members of the BioForge community will be able to use certified BIOS licenses (www.bios.net) to distribute their work. The BIOS Initiative provides a new licensing mechanism that encourages sharing of the core tools of innovation with all, while still allowing patenting of products, where necessary.

Not content with inventing new technology and new software communities, CAMBIA is also releasing new functionalities in its highly successful Patent Lens, which includes the world’s fastest free, full-text searchable patent database, with over 1.6 million patents in the life sciences. CAMBIA has flagged its intent to expand its scope beyond the life sciences to include all patents in many countries, to create comprehensive search capabilities and to assist with opportunities for patent system reform. CAMBIA has also just added the INPADOC patent status database to its free online service, now allowing any searchers to know the dynamic status of patent applications and patents in over 40 countries. “This expansion is part of our ongoing effort to restore transparency and trust in patent systems that are often perceived as misaligned with public interest”, says Greg Quinn, Senior Informatics Specialist at CAMBIA.

“BIOS is a model for a new innovation system for old challenges. It combines astute use of intellectual property, informatics, new biological sciences, and the unique human element that Internet communication now provides”, says Jefferson.

CAMBIA is a private, independent, non-profit institute partially self-financed, with assistance from the Rockefeller Foundation, R&D grants, and other philanthropic agencies. CAMBIA is an Affiliated Research Centre of Charles Sturt University (CSU).

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