

This is more common in a national laboratory setting. Two excellent examples are the Manhattan Project (in which the Los Alamos National Laboratory recruited the best brains of diverse backgrounds to create the first atomic bomb), and the international genome consortium (in which genomes of different organisms are being sequenced at an ever increasing pace).

In the second way, experts from different disciplines are brought together to widen the perspectives of solving a grand challenge problem.

Bioinformatics operates equally well in either mode, as does Einformatics. In these modes, bioinformatics took almost a decade to go mainstream. How soon Einformatics will go mainstream will depend on how quickly policy-makers enact carbon tax or equivalent laws, how quickly the dwindling energy resources are affecting economic growth, and the impact of pollution on the environment. The 2007 Nobel Peace Prize does help bring awareness to the public, so do the greensayers. But unlike the decade-long incubation period of bioinformatics, it is anticipated that Einformatics will go mainstream in a relatively short period, perhaps in 2–3 years, or in the next generation of university graduates.

University Curriculum

From the time bioinformatics was introduced in the 1980s until about the year 2000, students and young researchers interested in getting into bioinformatics constantly asked questions. Most of the questions are of a common nature: what do I (or my children) have to take in college to become a bioinformaticist?

It is anticipated that new Einformatics entrants will ask similar questions. First note that Einformatics, just like bioinformatics, is an interdisciplinary and transdisciplinary field:

- It is interdisciplinary because it involves a number of subject areas.
- It is transdisciplinary because experts in peripheral fields can apply new breakthroughs-
 - a. In their fields of expertise into the field, that is, in an enabled way;
 - b. In the field into their fields of expertise, that is, in an enabling way.

Just like bioinformatics, depending on the background of the experts, they each will likely offer a different definition of

Einformatics. Each definition will be as good as the other. The important point to note is that Einformatics is an enabling /enabled discipline. As such it will never replace the bench work and wet lab experiments of energy systems; it only helps the areas in which it is being applied to

- Eliminate unlikely candidates (such as which feedstock to use);
- Interrelate data and information (such as in analysis of Arctic ice thaw, carbon calculus);
- Extrapolate into regime inaccessible by experiments (such as in nuclear reactor technology);
- Elucidate long-term repercussions (such as global warming impact);
- Analyze energetics (such as that of corn ethanol, sugar ethanol);
- Etc.

Similar to bioinformaticists, it would be unwise for Einformaticists to just write the best computer software, or to just integrate the most sophisticated packages to churn out numbers and