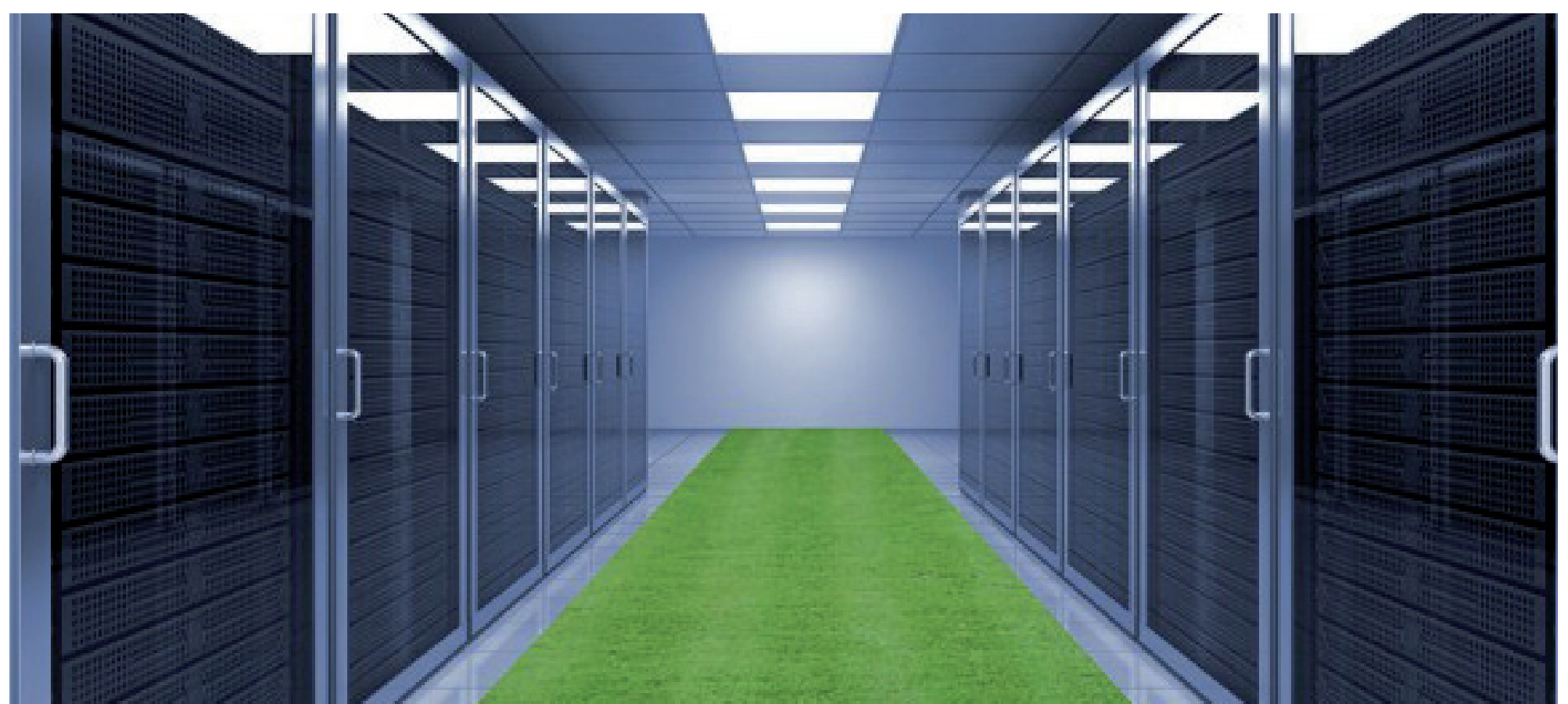
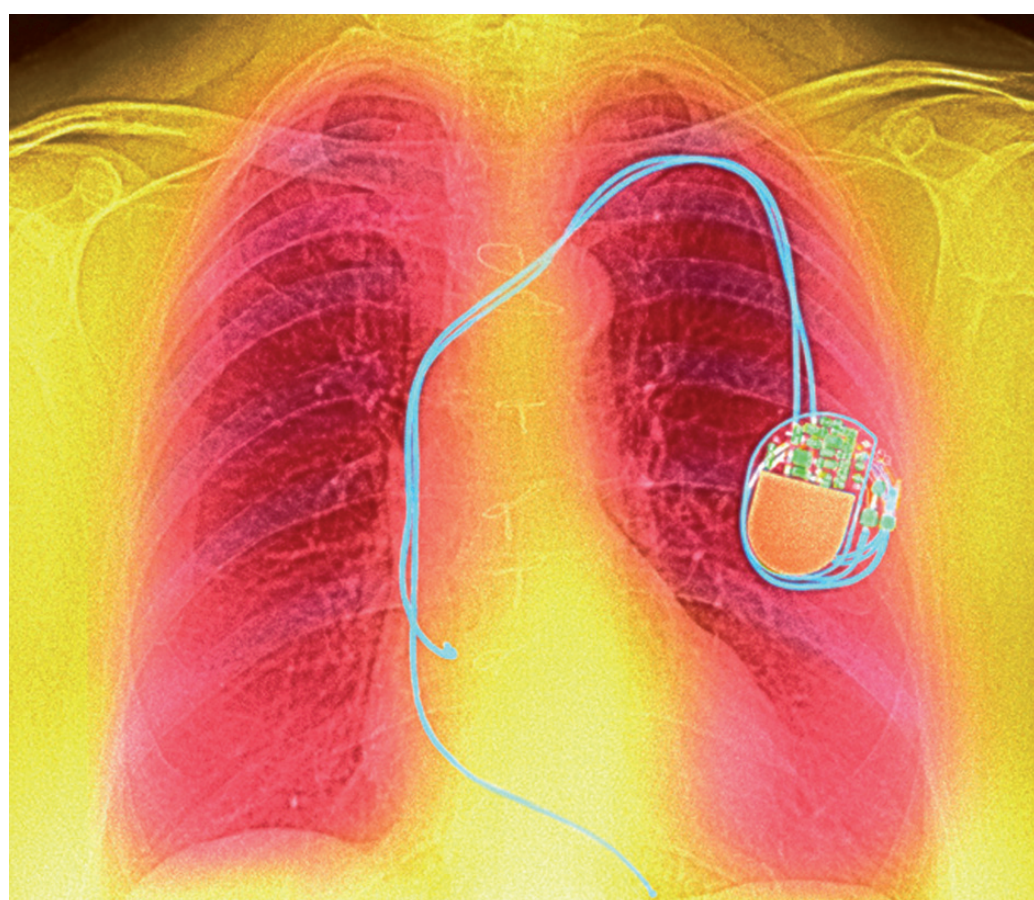


towards “greener” software predicting & controlling computing resource consumption

the energy consumption of computing has significant environmental impact

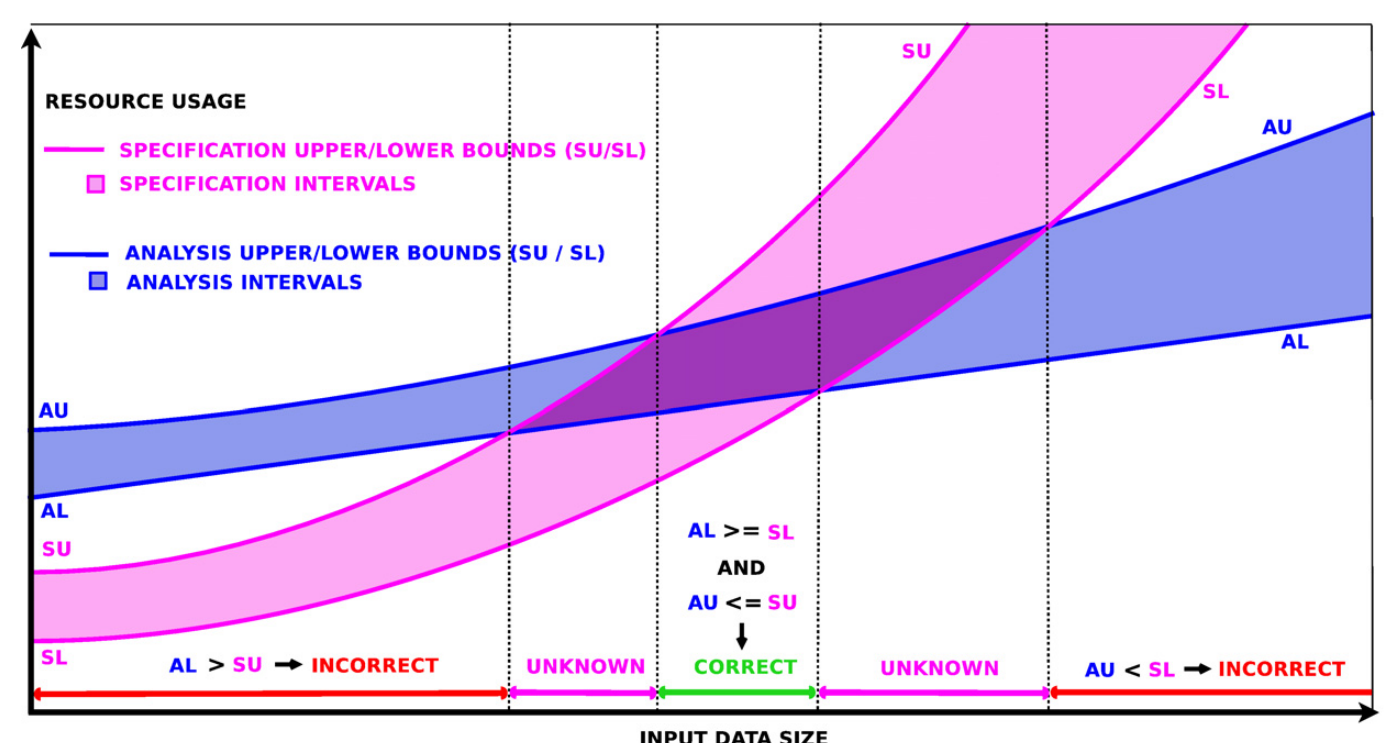
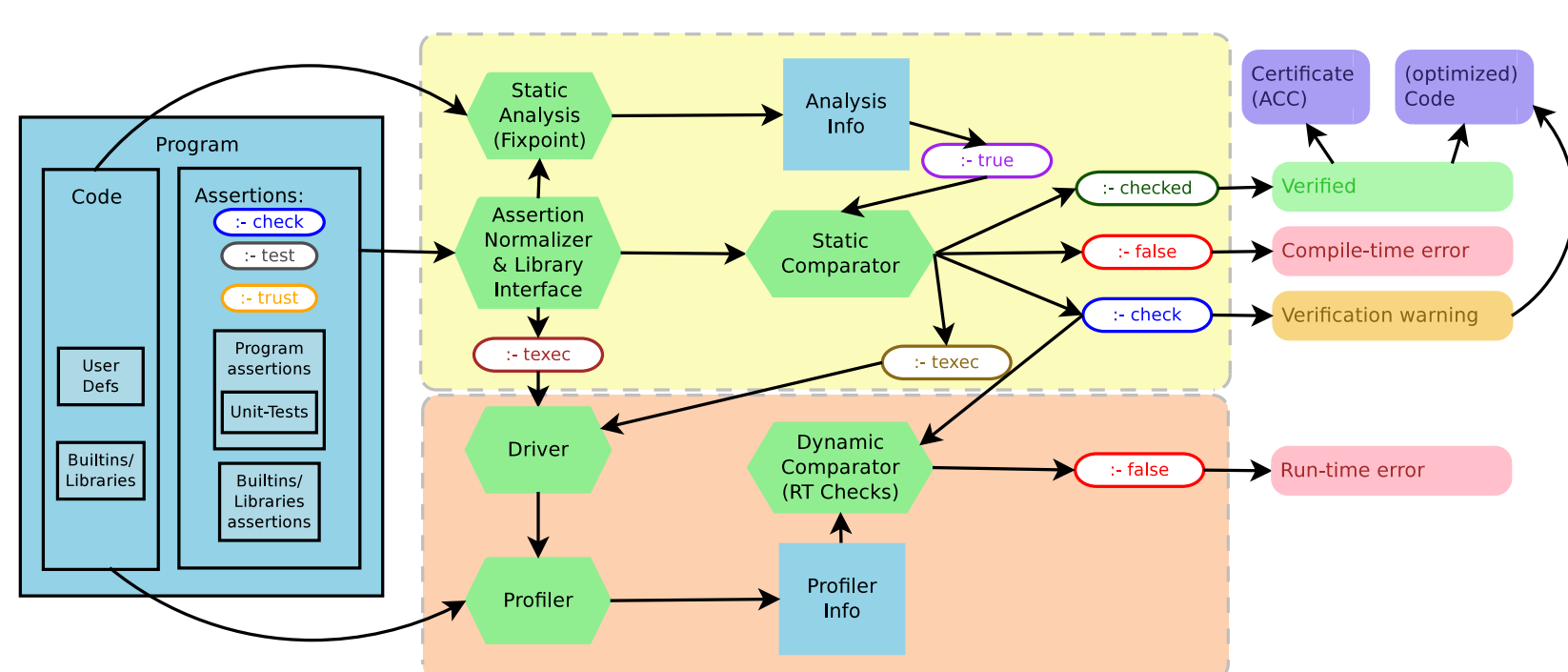
Energy consumption and the environmental impact of computing technologies have become a major worldwide concern. Optimizing energy consumption of battery powered phones, tablets and implantable medical devices is becoming an increasingly important requirement. The growth of cloud computing-related energy consumption and Internet traffic is not sustainable with the current energy efficiency levels.



the gains are in optimizing the software

Nowadays, more energy savings can be achieved by improving software technologies than by improving the underlying hardware. We promote energy efficiency into a first-class software design goal. We develop tools that facilitate the production of “greener” software, resulting in devices that make a certifiably more efficient use of their available *resources*: energy, and also execution time, memory, disk space, etc.

The resource consumption techniques are implemented with the IMDEA Software Institute's state-of-the-art tools, such as CiaoPP, and tested on concrete industrial application code examples.



the ENTRA EU project

The research on “greener software” is performed within the scope of the EU 7FP FET project ENTRA, in close collaboration with XMOS (UK), The University of Bristol (UK) and Roskilde University (Denmark). The ENTRA project proposes a novel, holistic, energy-aware system development approach that covers hardware, software, and the run-time environment.



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