

## Cell/B.E. University Challenge '07

### Judges

The panel of judges will be comprised of members of the academic community as well as IBM technical experts. Judges' decisions are final in all matters relating to the contest. To avoid conflicts of interest, judges who are employed at universities will not review or judge entries submitted by students of the university at which the judge is employed.

### Eligibility

Contest is open to undergraduate/graduate/PhD. students who are enrolled full-time or part-time at a two-, three-, or four-year accredited college or university in the list of participating countries found on the Contest website. Each student may submit one entry only in Challenge 2 of the contest. Proof of academic enrollment may be required. Employees of IBM, Einson Freeman, Inc. and judges of "Cell/B.E. University Challenge 2007" and the immediate family members and household members of each are not eligible to enter the contest.

### Submissions

The contest will be conducted in English and all submissions must be in English. Code submissions are limited to the following programming languages: C, C++. Submissions should be accompanied by documentation specifying the development environment details (hardware platform, operating system and version, programming language, version, IDE, etc). In addition, any shared libraries which are required should be specified explicitly. Any required platform libraries should be freely available. Contest judges will not purchase any development environments or libraries for the purpose of evaluating entries.



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## Cell/B.E. University Challenge '07

Challenge 1: Cell/B.E. Trivia  
Challenge 2: Top Innovator

### Participate And Win Excellent Cash Prizes!

- **Challenge 2 Grand Prize** : \$10,000 USD.
- **Challenge 2 Second Prize** : \$7,500 USD.
- **Challenge 2 Third Prize** : \$5,000 USD.
- **Challenge 2 Fourth Prize** : \$2,500 USD.
- **Challenge 1 Prizes (300):** One t-shirt awarded to each of the first 300 students to answer all Cell/B.E. Trivia questions correctly. [Design printed on the back, shown below]:



For Rules and Participating Countries, visit:  
<http://www-304.ibm.com/jct09002c/university/students/contests/cell/index.html>

# Which Challenge is for you?

## Challenge 1: Cell/B.E. Trivia

To compete in Challenge 1, the student must take an on-line quiz which can be accessed at the Registration Web site.

Challenge 1 is open from February 5, 2007 12:00 AM Eastern Time until March 31, 2007 11:59 PM Eastern Time.

Students must follow all instructions and complete the quiz in its entirety by answering all questions correctly. Once a student passes the quiz, he or she cannot take the quiz again. Students who do not answer all questions correctly the first time may continue to submit responses until the Challenge 1 deadline.

The first 300 students to answer all questions correctly will be awarded a t-shirt. Once the Contest sponsor has received 300 quizzes with correct answers to all questions, a notice will be posted on the Web site. After that time, and until March 31, 2007, students may still take the quiz, however, they will not receive a t-shirt when answering all questions correctly.

## Challenge 2: Top Innovator

To compete in Challenge 2, students must write a software program in one of the categories listed below.

Challenge 2 entries may be submitted starting February 5, 2007, and must be received by the contest sponsor no later than July 5, 2007 11:59 PM Eastern Time.

Participation in Challenge 2 requires downloading and installing the IBM Cell Broadband Engine Software Development Kit and the IBM Full-System Simulator for the Cell Broadband Engine™ (Cell/B.E.) on their system. The software is available at: <http://www-128.ibm.com/developerworks/power/cell/>.

Refer to the following Web site for system requirements: <http://www.alphaworks.ibm.com/tech/cellsw/requirements>.

Challenge 2 entries must include:

1. a 1-2 page high level description of the code and its attributes
2. submission of a proof-of-concept code including binaries.
3. any other supporting materials

## Challenge 2 categories:

**Application Solution Category** - Application-oriented solutions where Cell/B.E. processor is the main enabling technology. Examples of application sectors include but are not limited to:

Seismic applications, Financial Services, Medical Imaging, Electronic Design and Automation, Content Creation, Visualization and Management Digital Video Surveillance, Computational Biology and medicine, High Performance Computing, Simulation.

**Cell/B.E. Based Operating System Category** - Heterogeneous multi-core system software technology that enables Cell/B.E. processor resources to be used and managed effectively. Some example categories include but are not limited to: Kernel extension, Process scheduling, Cluster Scalability and system management, Real-time service.

**Programmability Category** - Concepts and implementations that enable the Cell/B.E. programmer to efficiently map workloads to the heterogeneous multi-core architecture of Cell/B.E. processor. Some examples include but are not limited to: Emerging Computational Model, Programming models and frameworks, Languages, Development tools - Debugger/Profiler/ Language Compiler and translators, Portability tools.

All entries must be compiled and tested using the IBM Cell Broadband Engine Software Development Kit and the corresponding IBM Cell Broadband Engine System Simulator.

By submitting entries in Challenge 2, the entrant agrees to license his or her code under any of the OSI approved licenses, all of which are available on [www.opensource.org](http://www.opensource.org). Refer to Licensing