

## SAP invites SDN to join international robotics competition FLL

### Summary

FIRST LEGO League (FLL) is SAP's major global program to support employee volunteerism. SAP employees from around the world engage as coaches and mentors to young people entering in the FLL competition and help children develop their enthusiasm for science and technology, explore their own creativity and learn how to work in a team.

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## FIRST LEO League (FLL)...

...is an international education program for children ages 9-14 (10-16 in Europe) that combines a hands-on, interactive robotics competition with a sports-like atmosphere. Teams consist of up to 10 players with the focus on such things as problem solving, creativity, analytical thinking, and team building. Each September, a new Challenge is unveiled to FIRST LEGO League (FLL) teams across the world. Then, over the course of about 8 weeks, they strategize, design, build, program, test and refine a fully autonomous robot capable of completing the various missions of the FLL "Robot Game" using the LEGO Mindstorms technology. They also search the web, talk to scientists, visit the library and develop compelling presentations based on the FLL International "Research Assignment", which relates to a problem or opportunity facing the world today. In the end, the teams match their results with others in competitions. While working on the project the teams experience all steps of a real product development process: solving a problem with time pressure, not enough resources and unknown competitors.

## SAP and FIRST LEO League

FIRST LEGO League (FLL) is SAP's major global program to support employee volunteerism. SAP employees from around the world engage as coaches and mentors to young people entering in the FLL competition and help children develop their enthusiasm for science and technology, explore their own creativity and learn how to work in a team.

## Now SDN can join this initiative!

SAP offers 50 SDN members all around the world the LEGO Mindstorms NXT equipment, which is needed to enter the competition with a team of 5 to 10 youngsters.

Each team is coached by minimum one 18-year-old adult, but we recommend sharing the responsibilities among 2 or 3 coaches, of whom one must be registered at SDN. SAP Global Corporate Social Responsibility provides the necessary equipment for the teams.

## FLL Challenge 2007: Power Puzzle - Energy Resources - Meeting the Global Demand

How do our personal energy choices to do things like heat our homes, fuel our cars, charge our cell phones, power our computers, or even download music to our IPODS impact the environment, economy, and life around the globe? Which resources should we use and why? Explore how energy creation and consumption choices affect the planet and our quality of life today, tomorrow, and for generations to come. Can FLL teams find the ultimate solution to this global Power Puzzle?

## How to organize a team

### The Coaches

Technology professionals are an excellent choice for the role of coach together with teachers and parents. Each FLL team is mentored by 2 to 3 coaches, of whom one must be registered at SDN. The coaches' role is to facilitate instruction and optimize the learning experience of the team members by allowing independent thought. The coaches must be 18 years or older and should possess the following abilities: the desire to explore side-by-side with children, good communication skills, prioritizing skills, and multi-tasking skills. Coaches do not need technical expertise but must be willing to acquire some basic knowledge of the programming environment and LEGO robot building. As a registered team, the coaches will have access to software and building instructional manuals from FLL.

The coaches are asked to keep themselves and their team always in the loop. Therefore, they are to check regularly their emails and the international FLL homepage [www.firstlegoleague.org](http://www.firstlegoleague.org) for current information. They are responsible for registering their team officially at the local FLL partner as soon as they have received the confirmation of participation by SAP, and for finding the space to practice with the team.

### The Team

An FLL team consists of 5 up to 10 members who must be between the ages of nine and 14 (ten and 16 in Europe). FLL teams can be part of a school classroom, after school program, extracurricular group, home school, neighborhood group, club or civic organization.

### Time Commitment

In August, the robot set will be sent to each registered team coach by Global Corporate Social Responsibility. Then teams can start meeting and exploring the system. However, the official competition does not begin until September 5<sup>th</sup> when teams receive their official task and the field setup kit from their regional FLL partner. Teams then set out to create a robot that fulfills these requirements exactly.

Typically, teams meet once or twice a week to complete their assignment, committing approximately 4-6 hours per week (an occasional Saturday or Sunday is often added for those teams getting closer to their tournament).

In November or December 2007 (in some countries only in early 2008), the FLL teams meet in local competitions to present their robots and research results. Dates for local competitions and the national championship will be announced later in the year by your local FLL partner organization.

### **The tournament preparation**

During the preparation period - approximately 8 weeks before the FLL tournament - each team prepares for the FLL regional tournament. The FLL Challenge will be announced on the internet on September 5<sup>th</sup>. Each year there is a different topic for the competition called the FLL Challenge based on current developments in the world. The FLL Challenge includes both solving the robot mission and preparing a research project.

### **Equipment – sponsored by SAP**

SAP Global Corporate Social Responsibility will provide the teams with the necessary LEGO Mindstorms NXT Set. The fees for team registration and tournament registration needs to be paid by the teams locally (as fees differ from country, please have a look at your country FLL website [www.firstlegoleague.org](http://www.firstlegoleague.org)). If you have any further questions, please contact [fill@sap.com](mailto:fill@sap.com).

### **How to Apply for Equipment**

SAP offers the FLL equipment to 50 SDN members in countries where FLL operates (see list below). Please post your team application within the FLL section by August 1, 2007 including answers to the following questions:

1. Why do you like to participate in FLL?
2. Please describe your FLL team and what is special about it (e.g. team spirit, technical know how).
3. How do you comprehend your role as an FLL team coach?
4. Please describe shortly possible ways of representing the results of your teamwork in SDN.

The SAP Corporate Social Responsibility (CSR) Team will select teams according to the questions 1-4, which stand for the following criteria: 1. motivation for participation, 2. team set up, 3. coach's role, 4. share own achievements with other teams.

The selected teams will be published in SDN. If your team is among the selected ones, please send your postal address to [fill@sap.com](mailto:fill@sap.com) and SAP CSR will send out the robot set directly to you.

### **FLL Countries**

FLL operates in Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Egypt, Faeroe Island, Finland, France, Germany, Greenland, Hungary, Iceland, India, Israel, Japan, Jordan, Korea, Lithuania, Mexico, Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Taiwan, Turkey, UK, and USA.

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