

FIRST LEGO League



- Sports for the mind...



A unique Partnership



FIRST LEGO League is an international Robotics Team Competition for children 9 - 14 developed in a partnership between the organization FIRST and LEGO Company.



A unique Partnership



FIRST

For Inspiration and Recognition of Science and Technology



...is a not-for-profit organization whose mission is to create a demand among children of all ages to want to learn more about math, science, engineering, and technology through hands-on programs and partnerships with leaders in industry

A unique Partnership



Dean Kamen, FIRST Founder:

“In every business I have ever seen, you start out with a problem at stake, not enough time, not enough resources, you don’t know what the competition is doing and you have to invent, design, develop, prototype, rebuild and fix. The FIRST LEGO League program is, in every way, a microcosm of a real business.”



The FLL Mission



Open children's eyes for the fun and excitement of *science* and *technology*

Develop children's ability to work in *teams*

Stimulate children's use of *creativity* in the problem solving process



Next major milestone...

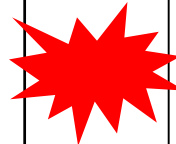
FIRST LEGO League World Invitational 2004

Ensure pool of future talent



Why FIRST LEGO League?

... an increasing need in Industry for a talented pool of well-qualified and creative people who can work together effectively

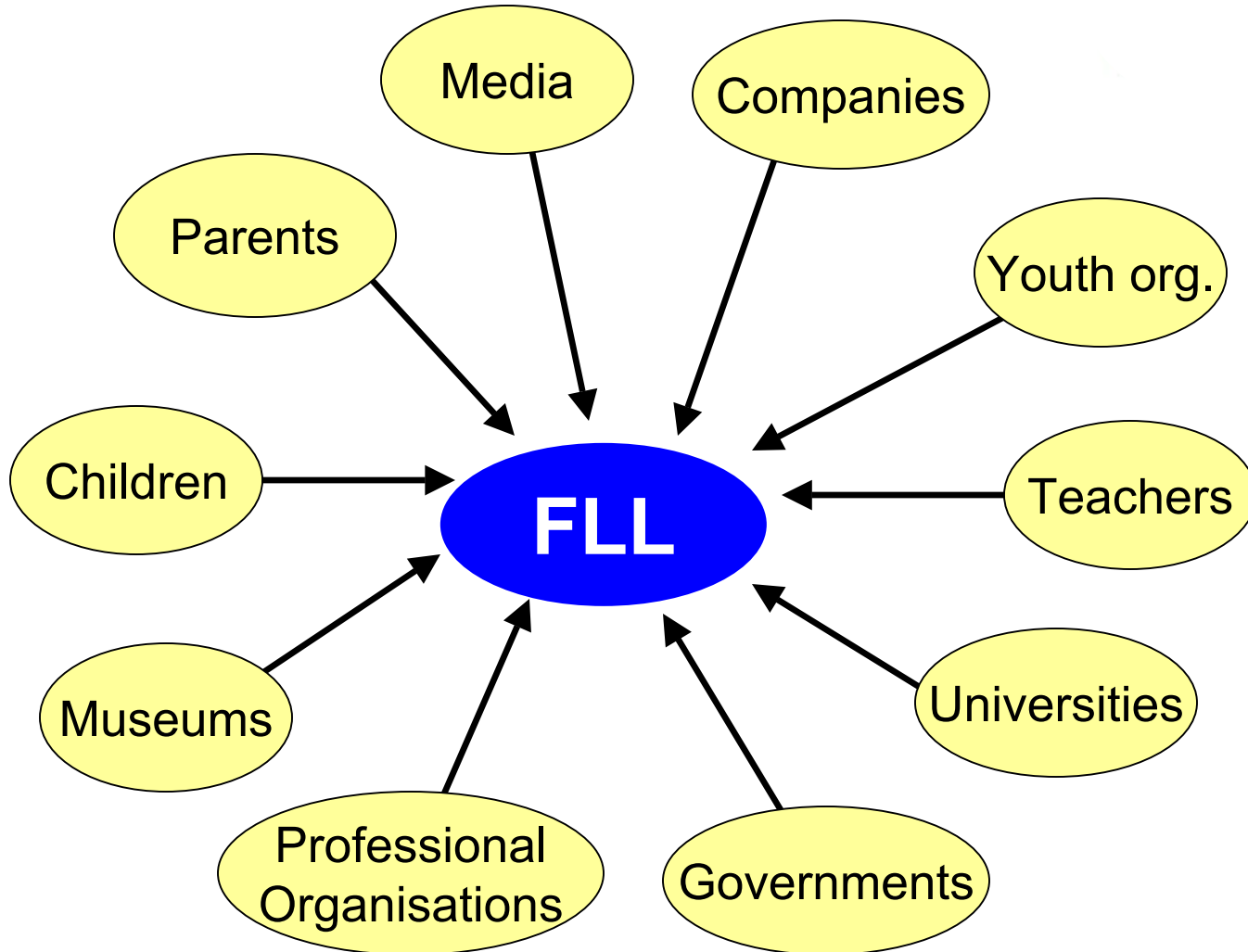


... youth's interest in science and engineering is decreasing significantly. They need to be inspired by something they find relevant and meaningful.

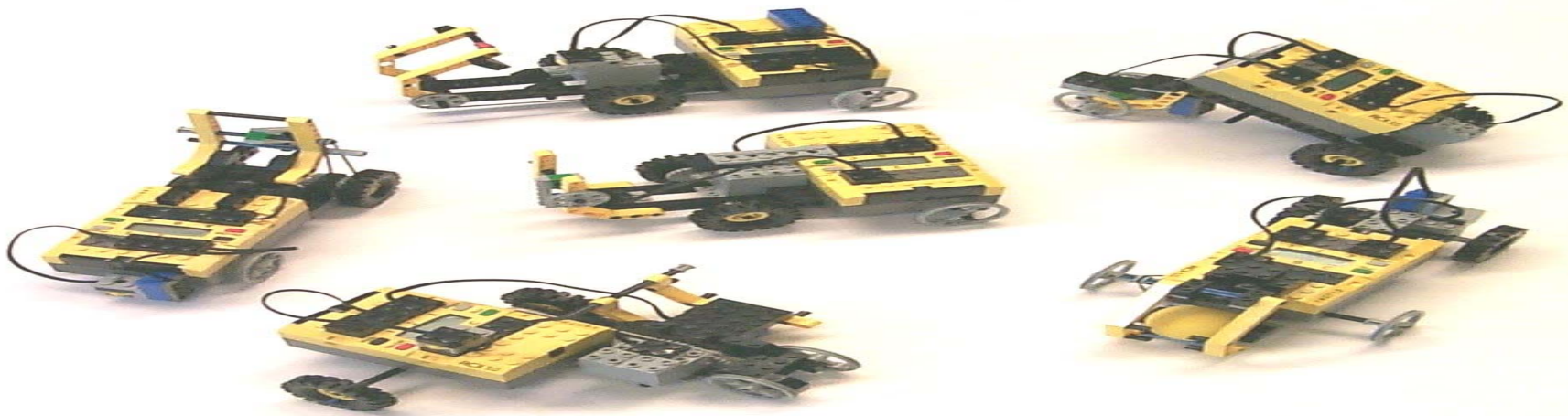
“Corporations can do something besides passively observe this disturbing development. They can actively contribute...

...to ensure the quality of the future workforce”

Who is involved with FLL?



The Beliefs behind



“Children learn best when they are actively engaged in constructing a personally meaningful artifact which they can reflect upon and share with others”

Seymour Papert
Professor, MIT Media Lab

“I want to build things nobody else has even thought of yet”

Charles Petersen
10 year-old FLL participant

Learning on several levels



Personal skills

- Working together as a team, dealing with the competition aspect, communication, self esteem, independence, responsibility.

Subject oriented inspiration and skills

- Design, engineering, mechanical principles, programming, documentation, research, PR/"journalism", marketing, problem solving, critical thinking, presentation.

Connection to the "real world"

- Direct contact to people from small and large corporations during the process (coaches and mentors) and at the tournament day (judges).

Local, national and international network

- The teams are encouraged to share ideas and challenges in the FLL internet community with other teams during the season.



How does it all work?



May 1st

FLL Team registration
opens internationally

Mid September

FLL Challenge released
internationally

November/December

FLL Tournaments
Internationally

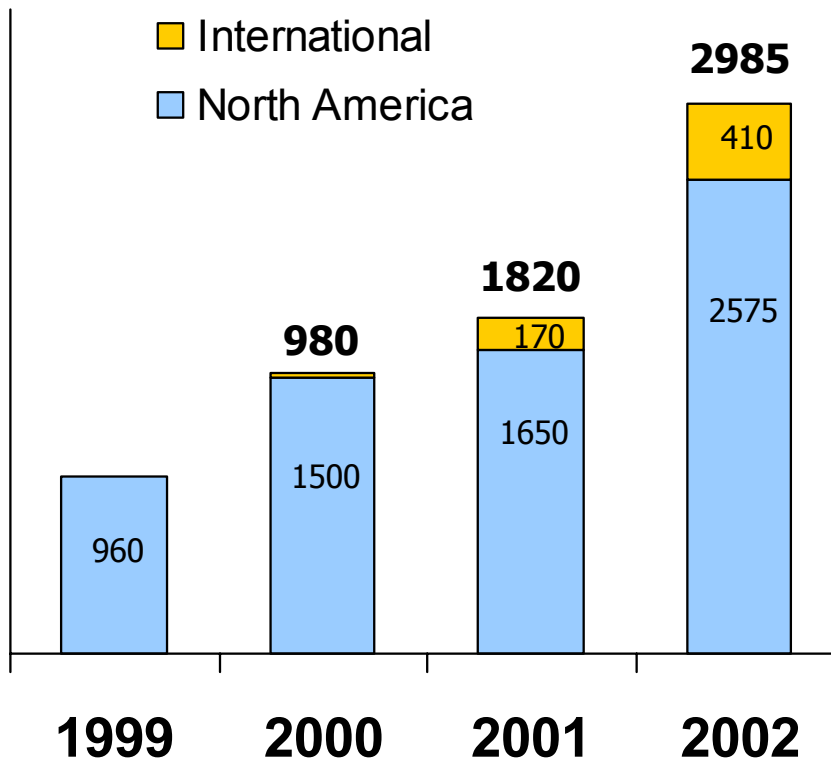
- The teams have 8 weeks to get ready for the tournament in November. This means:
 - Design, build, program and test their robotics invention
 - Develop a strategy for how to score as many points as possible
 - Research the challenge topic and prepare a presentation
 - Document their work



FLL Teams growth



Growth in number of national and international teams



Key performance indicators

- Growth from 2 pilot tournaments in the US in 1998 to 90+ in 2002
- Teams from 45 states participated in the US in 2002
- 92% of US teams involved in 2002 want to participate in 2003 season
- International presence in Singapore, the UK, Norway, Denmark, Sweden, Germany and France

**~ 27.000
children participated
in FLL in 2002**

Organization



The organizations behind FLL International:

In each country or region there is a FLL “Operational Partner”. The OP is responsible for organizing and managing the FIRST LEGO League program in that country.



North America



Germany, Austria, Switzerland



Norway, Denmark, Sweden



The UK



Singapore

A connected Community

www.firstlegoleague.org



INTERNATIONAL

International



- **FIRST LEGO League International** inspire children around the world to work together, use their creativity and engage in real world problems and opportunities.

Challenge 2002



Find all the details on your local FLL site:

- :: North America
- :: United Kingdom
- :: Germany
- :: Scandinavia
- :: France
- :: Singapore

:: Our Deepest Sympathies

The men and women of FIRST LEGO League would like to express our deepest sympathies to our friends at NASA on the tragic loss of the space shuttle, Columbia. We are deeply saddened by the loss of the seven astronauts on board. We knew some of them as friends, and we will remember and be inspired by the spirit and courage of them all. Our thoughts and prayers go out to their families and loved ones.

INFO

FLL INTERNATIONAL CHALLENGE 2003

- :: North America
- :: United Kingdom
- :: France
- :: Singapore
- :: Scandinavia

NEWS

GERMANY
6 regional tournaments

NORTH AMERICA
2500 teams registered!

UNITED KINGDOM
3 regional tournaments

SCANDINAVIA
255 teams registered!

FRANCE
Joins FLL International

International ::

- About FLL International ::
- North America ::
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- United Kingdom ::
- Germany ::
- France ::
- Scandinavia ::
- Teams and Tournaments ::

FLL Challenge History



— 1999 ——— 2000 ——— 2001 ——— 2002 ——— **2003** —→



Ex: The 2001 Challenge



Challenge theme: Global Warming

Is the earth warming or cooling?
Is it caused by nature or by humans?



Solve as many missions on the Playing Field as possible (2 min)

Research Assignment

The Robot Game

At the tournament day, teams are judged in four main categories:

- (1) Robot performance,
- (2) Technical quality, programming and Innovation
- (3) Teamwork
- (4) Research Presentation

The Tournament Day



The tournament is a one day event where all the teams meet to celebrate and show off their accomplishments at the end of the season.



FOTO: HELOE ØRNMO

Look and feel of the tournament:

- Atmosphere like a sporting event
- Big monitors with live feed
- DJ and MC
- Judges and referees
- Cool music
- Cheering and celebration of teams

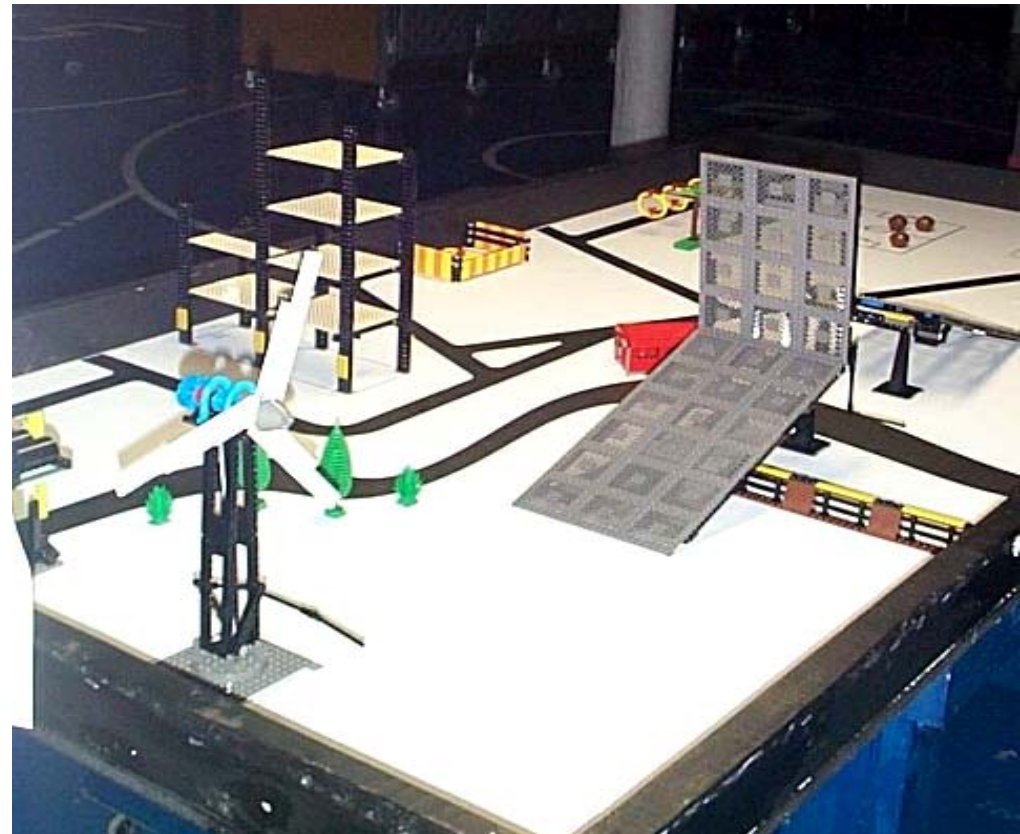


FOTO: HELOE ØRNMO

FLLI Robot Game (2002)



City Sights Robot Game





Video

The bottom line...



“This competition is the closest experience to a “real world” technical challenge that a child could hope for in the educational environment today”

Constance Lippert
SW engineer, Bell & Howell Information & Learning