IEEE Engineer in the New Millennium

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Presentation Summary

- Introduction
- IEEE
- IEEE SB Maribor
- Student Branch Congress 2000
- Symposium “Extra Skills for Young Engineers”
- Engineer in the New Millennium
Introduction

We will talk about:

- IEEE with the focus on organization.
- SB Maribor activities - are they important for young engineer?
- Networking the World – what does it mean?
- Lessons learned at Symposium “Extra Skills for Young Engineers”.
- Conclusion – Engineer of the New Millennium.
The Institute of Electrical and Electronics Engineers is a worldwide technical professional society, devoted to advancing the theory and application of electrical engineering, electronics and computing.

As an IEEE Student member you enjoy privileges that give you the competitive edge you need to succeed in your career.

Today's IEEE Student Members are the Future of the Profession!
Mission:

“To provide undergraduate and graduate students who have an interest in the Electrical/Electronics or related engineering professions with opportunities for education, technical and professional development in preparation for entry into the profession.”
IEEE geographic entities

Slovenia

IEEE

SB Maribor
IEEE SB Maribor

- Formed on November 20, 1993,
- located at Faculty of Electrical Engineering and Computer Science in Maribor,
- between 30 and 50 members,
- R8 Student Paper Contest,
- other activities.
SB Maribor Board

- Chair: Saša Jevtić
- Vice-Chair: Dejan Kastelic
- Secretary: Matej Mertik
- Treasurer: Boštjan Vlaovič
R8 Student Paper Contest

- Submitted papers are selected at IEEE Slovenia Section Student Paper Contest,
- 2nd place in Paris (France), 1993: Aleš Časar, Robert Meolic,
- 2nd place in Limassol (Cyprus), 1995: Denis Đonlagić,
- The best technical presentation in Munich (Germany), 1997: Matej Kupljen, Martin Pec,
- 1st place in Bled (Slovenia), 1999: Vili Podgorelec.
Activities in the year 99/00

LTW in Passau, 1999

http://www.um.ieee.si/reports/passau99/
LTW in Passau, 1999
Activities in the year 99/00

Prepare yourself for the project!
Find sponsors!

Make them happy!
Student Branch Congress

Present your ideas!

Discuss actual problems!

Find solutions!
Student Branch Congress

Present your country!

Meet people!

Have fun!
Student Branch Congress
Student Branch Congress
Student Branch Congress
Student Branch Congress
Activities in the year 99/00

- 26. September, 2000 (Portorož, Slovenia): Slovenian Student Paper Contest
Slovenian Student Paper Contest

Regional Paper Contest

EUROCON '2001
INTERNATIONAL CONFERENCE ON TRENDS IN COMMUNICATIONS
Slovenian Student Paper Contest
Activities in the year 99/00

- 26. September, 2000 (Portorož, Slovenia): Slovenian Student Paper Contest
- 18. - 20. October, 2000 (Maribor, Slovenia): Extra Skills for Young Engineers
Extra Skills for Young Engineers

- Idea for the project
- Project preparation
- Project management
- Realization
- Post project activities
Idea for the project

- SBC 2000 – Eindhoven
- Theodore Hissey’s lecture
- Discussions with congress participants
- Local student interest
- Industry interest
- Organizational experience
• Symposium organizing committee:
  – Boštjan Vlaovič, chair
  – Zmago Brezočnik,
  – Filip Samo Balan,
  – Aleš Časar,
  – Bogdan Dugonik,
  – Dejan Kastelic,
  – Robert Meolic,
  – Aleksander Vreže.
Project preparation

• Objectives:
  – presentation of needed skills to international group of young engineers and students (proceedings),
  – presentation of local industry,
  – company visits,
  – student project presentations,
  – technically interesting,
  – some fun for the participants.
Project management

- Management Committees:
  - Program Committee,
  - Registration Committee,
  - Company Visits Committee,
  - Fun Committee.
Realization

• Sponsors:
  – writing applications,
  – talking to peers and managers,
  – preparing exhibition place

• Marketing:
  – arranging interviews,
  – talking to the press,
  – writing articles,
  – preparing posters, ...
Exhibition Place
Informing students

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**Extra Skills for Young Engineers**

FERI Maribor
18.-20. oktober, 2000

**Prehodna konferenca**

Nastop skupine "The Stroj" v sodelovanju s

**Razmišljanje vhunskih strokovnjakov o znanjih in znanju za naslednje tisočletje**
Jorge Luis Sánchez Ponz, Studentski predstavnik IEEE
prof. dr. Marko Jajodič, predsednik Elektrotehniške univerze Slovenije
prof. dr. Matjaž Gams, institut "Jožef Stefan"
prof. dr. Evelyne Reding, Vienna University of Technology
mag. Ivan Pospiešnik, Njon podpravni komunikacijski in državni

**Strokovna ekspanzija**

**Vijudno vabilenje**

Kotizacija za udarečbo, žbornik in ekspanzijo samo 1000 SIT.
za študirnike članje IEEE brezplačno.

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**IEEE je največja stanovska organizacija elektrotehnikov in računalnikarjev.**
IEEE je prava pot do najboljših tehničnih informacij, pričakovanje za nenehno učenje in odkrivanje vrednosti povezave, ki jo potrebuje vsak strokovnjak.
IEEE členarine so med najnajstvom v tehničnih organizacijah, študentski članje tako koristijo ugodnosti in proizvode za manj kot 20 USD.

Kot študentski član IEEE imaš ugodnosti, kot so:
- dostop do 36 IEEE tehničnih združenj,
- brezplačni mesečnik "IEEE Spectrum magazine",
- online tehnične informacije,
- slika s podobnimi inovatorji,
- uporaba mednarodne borze dela,
- popusti pri širki, zbirki proizvodov in storitev.

**Pridržu se IEEE še danes!**

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**Kontaktna oseba:**
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URL: http://www.um.iee.si/
Getting attention

Opening with the musical performance.
Getting attention
Getting attention
Having Fun
Symposium

- Second day of the activities
- Four main sessions
- Poster session for student projects
- Two coffee breaks
- Lunch and dinner
- Egg Drop Contest
Lectures

- IP video conference with Center for distance education and development,
- Jorge-Luis Sanchez-Ponz – R8 Student representative,
- prof. dr. Matjaž Gams – IJS,
- poster session,
- prof. dr. Damjan Zazula, deputy dean,
- dr. Eveline Riedling, Vienna University of Technology,
Lectures

- Egg Drop Contest,
- Miran Bratkovič, Iskratel d.o.o.,
- mag. Zofija Mazej Kukovič, Esotech d.d. (ISDN video conference),
- Primož Krajnik, Zaslon d.o.o and Andrej Kuščer, Hermes SoftLab d.d. (ISDN videoconference with University of Ljubljana),
- Primož Skočir, Nil. d.o.o.
Title:
Innovation & Idea Management for Engineers

Message:
All the engineers must watch constantly toward the future. In the chain of the businesses, the changes take place at all times ...
Message:

People possessing knowledge (*know how*) are the key resource of companies pursuing innovation. Knowledge and ideas are infinite economic goods that can generate increasing returns through their systematic use.

Consequently, the engineers, in addition to the technical background, must look for some basic or advanced courses on management, in order to become innovators and not just mere engineers.
Title:
Information society – End of PCs?

Message:
The paper analyses changes in the information society especially through the technical and employment viewpoint. As commonly known, qualified IT workers are heavily needed in the developed world and in Slovenia already. Shortages are going to grow in the forthcoming years and thus students with IT qualifications are going to be more and more needed.
Message:

... the need of skilled workers because of the enormous technological growth, and the failure of the education system to produce enough IT tech minds results in growing imports of technically educated stuff. USA has the following no. of visas for skilled workers:

<table>
<thead>
<tr>
<th>USA visas</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>65,999</td>
</tr>
<tr>
<td>1998</td>
<td>115,000</td>
</tr>
<tr>
<td>2000</td>
<td>200,000</td>
</tr>
</tbody>
</table>
Needed IT workers in Western Europe in millions

<table>
<thead>
<tr>
<th>Year</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>0.4</td>
<td>0.8</td>
<td>1.2</td>
<td>1.6</td>
<td>1.8</td>
<td></td>
</tr>
</tbody>
</table>

Job Fair, Zagreb, Croatia, March 2001. IEEE Engineer in the New Millennium
Poster Session

• Student projects:
  – VIDERO (Virtual Delivery Room)
Poster Session

- Student projects:
  - Increase Your Knowledge:
    The Monthly Publication of the IEEE Student Branch Graz
Title:

Which Extra Skills for Young Engineers?

Message:

...an introduction to some extra skills as communication, technical documentation and team work, which are necessary for a young engineer from the beginning of the professional life in order to make a satisfying and successful career in industry or university.
Message:

Communication competence

Team competence

Techniques and methods of engineers work

Computer tools

Money aspects

Life long learning

ENGINEEER
• **Message:**

There are many extra skills for young engineers, which are important for a successful carrier. But it depends on the personal viewpoint, if all these skills are called "extra" or "basic" skills for young engineers ...

And now I do not use the word "young" anymore. Aiming for a carrier, a successful life in industry, in research or in educational institutions, almost nobody will get good jobs without these additional skills - and, probably even more important, will not keep a good job without improving these skills in a life long learning process.
Lunch
Egg Drop

- Fun part of the symposium

- Easy rules:
  - The aim of the contest is to drop an egg from a certain height (about 4m) using a cage, shelter, parachute or some similar kind of construction to protect the egg from breaking it. The egg should land as close as possible to the target at the floor as quickly as possible. The construction should be as light as possible.
  
Egg Drop
Egg Drop
Egg Drop
Egg Drop
Egg Drop
Egg Drop

Job Fair, Zagreb, Croatia, March 2001. IEEE Engineer in the New Millenium
Title:
Introduction to cadre needs of Iskratel d.o.o.

Message:
1050 employees, 405 researchers...

6       Ph. D.
38      M. Sc.
225     Engineers
138     B. Sc.
Message:

Expected Applicant’s Skills:

- programming skills (emphasis on C)
- knowledge of processor logic,
- familiarity with digital techniques,
- basic telecommunication knowledge,
- capabilities of logical thinking,
- readiness for life long learning,
- command of an English language,
- basic IT skills,
- sense for team work.
ISDN Video Conference (6 B-channels)
Title:
Engineers working place at Esotech

Message:
New economy, ecological awareness, reconstruction of energy systems, ...
ISDN Video Conference (2 B-channels)

Title: 
Career for the Software Engineer

Message:
Plan your professional career path. Think about what do you expect from your job?
Job is not only about money! Can you grow professionally? It is not only about intelligence, it is more to it! Find your own way ... be happy.
Title:
Profile of Nil’s engineer

Message:
We need engineers with extra skills... you have to constantly prove that you are improving and learning. Training and certification is very important...you have to be innovative.
Good communication skills are essential!
Company visits

- Hermes Softlab d.d.
- Iskratel d.o.o.
- Esotech d.o.o.
Engineer in the New Millennium

- Be enthusiastic about your work,
- Networking the world,
- Management skills,
- Financial Skills,
- Communication Skills,
- Experience!
Conclusion

Discussion!