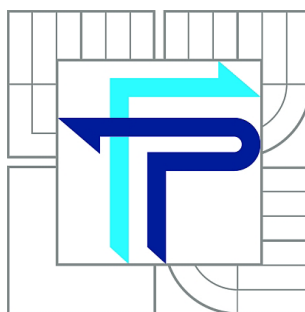# VYSOKÉ UČENÍ TECHNICKÉ V BRNĚ
BRNO UNIVERSITY OF TECHNOLOGY

## FAKULTA PODNIKATELSKÁ
## ÚSTAV INFORMATIKY

FACULTY OF BUSINESS AND MANAGEMENT
INSTITUTE OF INFORMATICS

# INFORMATION SYSTEM FOR ESN SECTION
INFORMAČNÍ SYSTÉM PRO ESN SEKCI

## BAKALÁŘSKÁ PRÁCE
BACHELOR'S THESIS

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BRNO 2013

# Bachelor Thesis Assignment

## František Hromada

Managerial Informatics  (6209R021)

Pursuant to Act. No. 111/1998 Coll.,  on Higher Education Institutions, and in accordance with the Rules for Studies and Examinations of the Brno University of Technology an Dean's Directive on Realization of Bachelor, Master and Doctoral Degree Programs, the director of the Institute of is submitting you a bachelor thesis of the following title:

**Information System for ESN Section**

In the Czech language:

**Informační systém pro ESN sekci**

Instructions:

Introduction
Description of problematics and goal of thesis
Theorecal background of thesis
Analysis of current situation
Proposal and benefits of proposal
Conclusion
References
Attachments

Literature / Sources:

ELMASRI, R. and S. NAVATHE. Fundamentals of Database Systems. 4th ed. Boston: Addison Wesley, 2003. 1009 p. ISBN 978-0321122261.

CHURCHER, C. Beginning Database Design. 1st ed. New York City: Apress, 2007. 272 p. ISBN 978-1590597699.

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REA, L. M. and A. R. PARKER. Designing and Conducting Survey Research. 2nd ed. San Francisco: Jossey-Bass, 1997. 272 p. ISBN 9780787908102.

The supervisor of bachelor thesis:     Ing. Jan Luhan, Ph.D.

The deadline for submission for the bachelor thesis is given by the Schedule of the Academic year 2012/13.

doc. RNDr. Bedřich Půža, CSc.
Director of the Institute

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Dean of the Faculty

Brno, 28.2.2013

# Abstract

Bachelor thesis mainly focuses on designing an information system which supports main processes of International Students Club of Brno University of Technology and other sections of Erasmus Student Network. Thesis contains theoretical part, analysis of current state and proposal of information system.

# Abstrakt

Bakalářská práce se zaměřuje především na vytvoření informačního systému pro podporu hlavních procesů Medzinárodního studentského klubu Vysokého učení technického v Brně a jiných sekcí Erasmus Student Network. Práce obsahuje teoretickou část, popis současného stavu, jeho souhrn a návrh informačního systému.

# Keywords

Information system, database, buddy system, ISC VUT, ESN, Erasmus

# Klíčová slova

Informační systém, databáze, buddy system, ISC VUT, ESN, Erasmus

## Bibliographical quotation of the thesis

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## Čestné prohlášení

Prohlašuji, že předložená bakalářská práce je původní a zpracoval jsem ji samostatně. Prohlašuji, že citace použitých pramenů je úplná, že jsem ve své práci neporušil autorská práva (ve smyslu Zákona č. 121/2000 Sb., o právu autorském a o právech souvisejících s právem autorským).

V Brně dne 31. května 2013

## Statutory declaration

I hereby declare that this bachelor thesis has been written by me without any external unauthorized help, that it has been neither presented to any institution for evaluation nor previously published. All used information sources are properly cited including complete reference to the original work.

In Brno, 31st May 2013

..............................
František Hromada

## Acknowledgments

# Table of content

# Introduction

The Erasmus Programme (EuRopean Community Action Scheme for the Mobility of University Students) is flagship project of European Union (EU) in field of education established in 1987 as part of the EU Lifelong Learning Programme 2007–2013 (NAEP 2013).

Erasmus Student Network (ESN) is one of the biggest interdisciplinary student associations in Europe. It was established on 16th October 1989 and legally registered in 1990 for supporting and developing student exchange. ESN has 12.000 members from 427 local sections in 36 countries working on a volunteer base in Higher Education Institutions and offering services to 160.000 students (ESN AISBL 2013).

Erasmus Student Network Czech Republic (ESN CZ) is member since 2001 and currently has 15 local sections with mission is to foster student mobility in Czech Higher Education under the principle of Students Helping Students. All together sections of ESN CZ help roughly 4 000 international students every academic year. (ESN CZ 2013)

International Student Club of Brno University of Technology (ISC VUT Brno) was established in 2004 with just 40 exchange students. Today is taking care around 450 exchange students per academic year with main activities as buddy system and events organizing (ISC VUT Brno 2013).

ISC VUT Brno has growing number of exchange students over the years which required additional volunteers. Larger amount of human capital needs appropriate management and therefore came idea of this bachelor thesis to design a tool for the process management of ESN section.

ESN network stand on the idea of mutual sharing of best practices and know how so this information system would be available to other ESN sections, which would provide also valuable feedback from larger user base.

During my work I will rely on my experiences on different levels of ESN - observing member, president of the section, who helped establish many processes and as National Representative of ESN CZ, who attended many international events and had possibility to confront ideas with other sections of the network.

For the analysis part I will combine previous experiences with my knowledge acquired during studies to describe main processes of an ESN section, followed by design proposal of information system, which should make described processes more effective, resulting in higher staff efficiency and productivity.

# 1 Theoretical background

Theoretical part should provide introduction to the problematic of information systems. Further on there will be a description of information system components and process of implementation.

## 1.1 Data, information and knowledge

The terms data, information and knowledge are frequently misused as synonyms. The main difference is in the level of abstraction where. data is the lowest level of abstraction, information is second, and on the top is knowledge (VALACICH, 2007, p. 20).
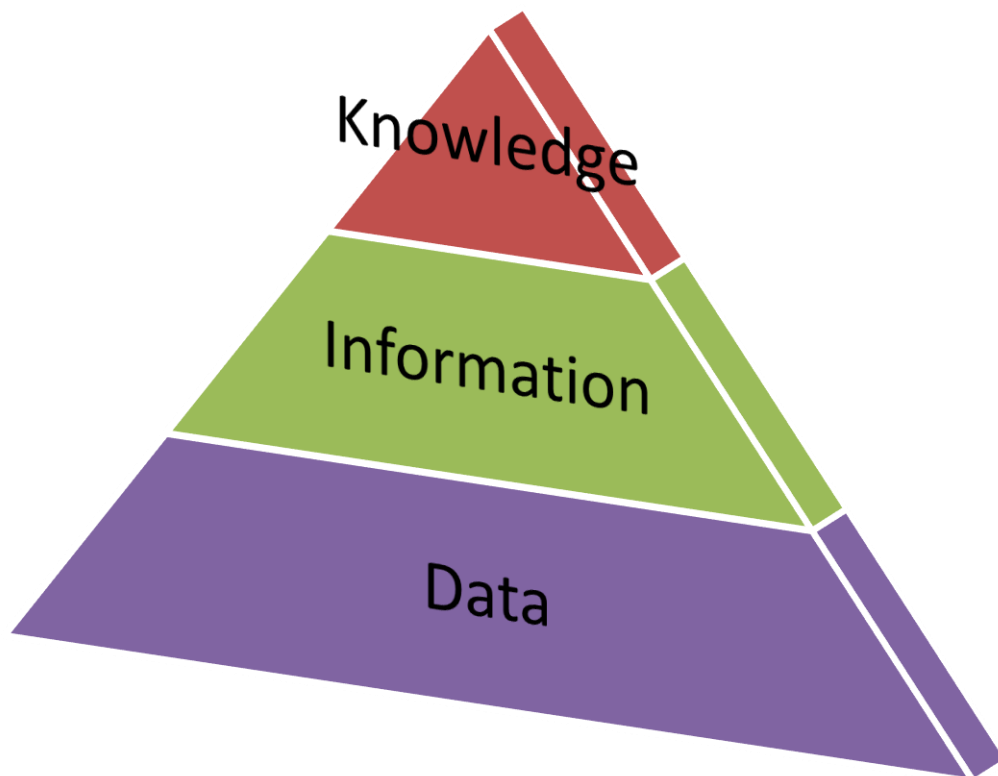


**Figure 1: Data, information, knowledge(VALACICH, 2007, p. 20).**

Data itself has no meaning. Data can be transformed into information by interpretation if they have a meaning for subject. Therefore they can create knowledge base for decision making and also for better data transformation.

## 1.2 Information system

Information system (IS) includes procedures, data, software, and hardware that are used to gather and analyze information. The main aim of IS is to make decision-making, processes and information management effective. (VALACICH, 2007, p. 28)

However, the term IS and information technologies (IT) are often used interchangeably, which might cause confusion. Word IT refers to the technology, while IS also incorporates how it should be managed and applied to the organization.

## 1.3 ICT

Information and Communication Technology is often used as a synonym for IT. In a very broad sense, the term information system is also used to refer to the interaction between people, processes, data, and technology. In this sense, the term is used to refer not only to the information and communication technology (ICT) an organization uses, but also to the way how people interact with this technology (LAUDON, 2009, p. 35).

Clear distinction between information systems, computer systems and business processes can be made based upon their main purpose. Information systems include an ICT but they are not purely based on it. Information systems are more focusing on the end usage of IT.

Business/organizational processes are description of predefined steps, which resemble behaviour of information systems. However for designing a information system you already need to know processes description and main aim of IS is to manage them effectively.
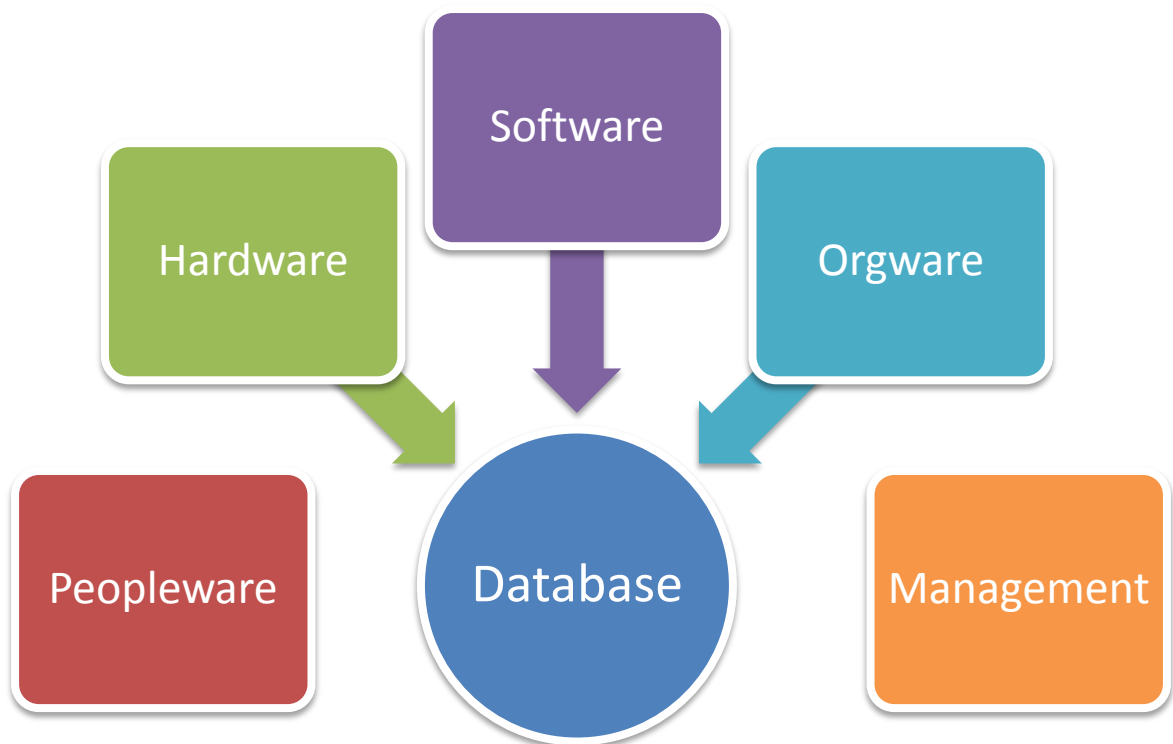
**Figure 2: Information system (KOCH, 2010, p. 5)**

## 1.4 Software

Software, is defined as set of instructions that directs a computer's processor to execute specific operations. Naming is in contrast with computer hardware, the physical objects (processor and related devices) that carry out the instructions (BRANDON, 2006, p. 42).

On most computer platforms, software can be grouped into a few broad categories:

a. **System software** is the basic software needed for a computer to operate (most notably the operating system).

b. **Application software** is all the software that uses the computer system to perform useful work beyond the operation of the computer itself.

c. **Embedded software** resides as firmware within embedded systems, devices dedicated to a single use. In that context

there is no clear distinction between the system and application software.

## 1.5 Hardware

Computer hardware is collection of physical elements that constitute a computer system. Computer hardware refers to the physical parts or components of a computer such as monitor, keyboard, Computer data storage, hard drive disk, mouse, printers, CPU (graphic cards, sound cards, memory, motherboard and chips), etc. all of which are physical objects that you can actually touch. In contrast, software is untouchable (BRANDON, 2006, p. 40).

## 1.6 Orgware

Orgware is set of recommended rules set up by organization, which should be applied during work with information system. (KOCH, 2010, p. 5)

## 1.7 Peopleware

Peopleware can refer to anything that has to do with the role of people in the development or use of computer software and hardware systems, including such issues as developer productivity, teamwork, group dynamics, the psychology of programming, project management, organizational factors, human interface design, and human-machine-interaction.

The concept of peopleware in the software community covers a variety of aspects (ACUNA, 2005, p. 9-11):

- Development of productive persons
- Organizational culture
- Organizational learning
- Development of productive teams, and
- Modelling of human competencies.

## 1.8 Management

Management in all business and organizational activities is the act of coordinating the efforts of people to accomplish desired goals and objectives using available resources efficiently and effectively.

Management comprises planning, organizing, staffing, leading or directing, and controlling an organization (a group of one or more people or entities) or effort for the purpose of accomplishing a goal. Resourcing encompasses the deployment and manipulation of human resources, financial resources, technological resources, and natural resources. (BRANDON, 2006, p. 52-56).

## 1.9 Database

Database is an organized collection of data and refers to the logical database, to physical database as data content in computer data storage or to many other database sub-definitions.

The term database is correctly applied to the data and their supporting data structures, and not to the database management system (DBMS). The database data collection with DBMS is called a database system (ELMASRI, 2003, p. 22-24).

The term database system implies that the data is managed to some level of quality (measured in terms of accuracy, availability, usability, and resilience) and this in turn often implies the use of a general-purpose database management system (DBMS) (ELMASRI, 2003, p.48).

A general-purpose DBMS is typically a complex software system that meets many usage requirements, and the databases that it maintains are often large and complex. The utilization of databases is now spread to such a wide degree that virtually every technology and product relies on databases and DBMSs for its

development and commercialization, or even may have such embedded in it. Also, organizations and companies, from small to large, heavily depend on databases for their operations.

Well known DBMSs, Oracle, IBM DB2, Microsoft SQL Server, PostgreSQL, MySQL, SQLite

. A database is not generally portable across different DBMS, but different DBMSs can inter-operate to some degree by using standards like SQL and ODBC to support together a single application. A DBMS also needs to provide effective run-time execution to properly support (e.g., in terms of performance, availability, and security) as many end-users as needed (CHURCHER, 2007, p. 38).

## 1.10 Entity–relationship model

Entity–relationship model (ER model) is a data model for describing a database in an abstract way. In the case of a relational database, which stores data in tables, some of the data in these tables point to data in other tables - for instance, your entry in the database could point to several entries for each of the phone numbers that are yours.

The ER model would say that you are an entity, and each phone number is an entity, and the relationship between you and the phone numbers is 'has a phone number'. Diagrams created to design these entities and relationships are called entity–relationship diagrams or ER diagrams. (ELMASRI, 2003, p. 52-53).
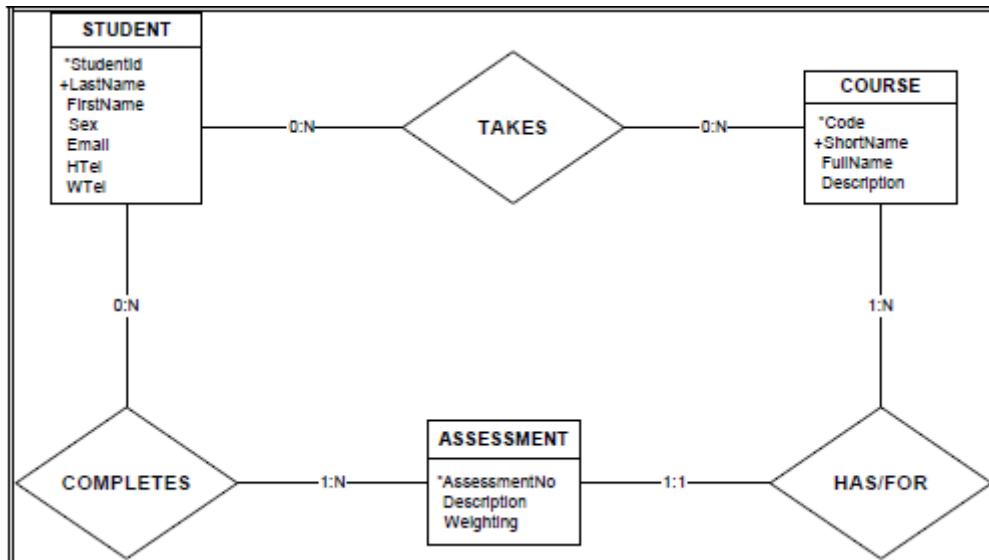
**Figure 3: Example of relationship diagram (ELMASRI, 2003, p. 52).**

### 1.10.1 Conceptual data model

This is the highest level ER model in that it contains the least granular detail but establishes the overall scope of what is to be included within the model set. The conceptual ER model normally defines master reference data entities that are commonly used by the organization. Developing an enterprise-wide conceptual ER model is useful to support documenting the data architecture for an organization (ELMASRI, 2003, p. 56).

A conceptual ER model may be used as the foundation for one or more logical data models. The purpose of the conceptual ER model is then to establish structural metadata commonality for the master data entities between the set of logical ER models. The conceptual data model may be used to form commonality relationships between ER models as a basis for data model integration.

### 1.10.2 Logical data model

A logical ER model does not require a conceptual ER model, especially if the scope of the logical ER model is to develop a single disparate information system. The logical ER model contains more detail than the conceptual ER model. In addition to master

data entities, operational and transactional data entities are now defined. (CHURCHER, 2007, p. 47)

The details of each data entity are developed and the entity relationships between these data entities are established. The logical ER model is however developed independent of technology into which it will be implemented.

### 1.10.3     Physical model

One or more physical ER models may be developed from each logical ER model. The physical ER model is normally developed to be instantiated as a database.

Therefore, each physical ER model must contain enough detail to produce a database and each physical ER model is technology dependent since each database management system is somewhat different.

The physical model is normally forward engineered to instantiate the structural metadata into a database management system as relational database objects such as database tables, database indexes such as unique key indexes, and database constraints such as a foreign key constraint or a commonality constraint.

The ER model is also normally used to design modifications to the relational database objects and to maintain the structural metadata of the database.

The first stage of information system design uses these models during the requirements analysis to describe information needs or the type of information that is to be stored in a database. The data modelling technique can be used to describe any ontology for a certain area of interest (ELMASRI, 2003, p. 59).

In the case of the design of an information system that is based on a database, the conceptual data model is, at a later stage, mapped to a logical data model, such as the relational model; this in turn is mapped to a physical model during physical design.
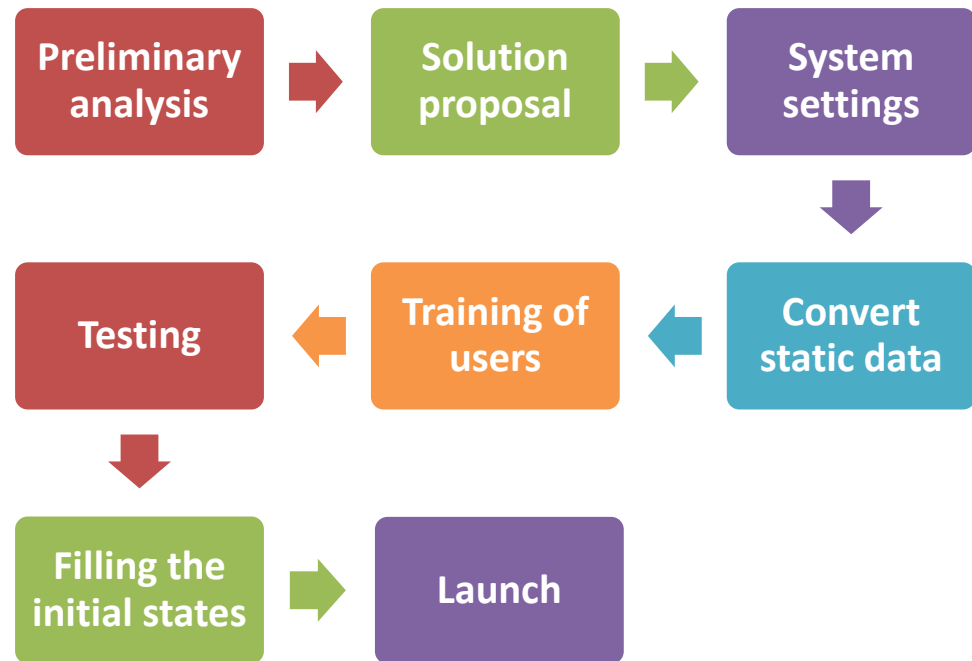
## 1.11 Implementation of IS



**Figure 4: Implementation of IS (BRANDON, 2006, p. 84)**

### 1.11.1 Preliminary analysis

Purpose of this analysis is to map all current processes and mutual connections between them. Also includes a description of the organization operations and new requirements for processes that have not been resolved or are planned for the future.

### 1.11.2 Solution proposal

Knowledge obtained during initial analysis is used for detailed description of work processes in the new IS. This new solution along the bring changes in organization workflow to greater efficiency.

### 1.11.3    System settings

All planned features and data binding function need to set up the system, such as parameters, foundation, sequentially numbered documents and their mutual interrelationship to meet basic classifications. After that system is ready for filling data.

### 1.11.4    Convert static data

In case an organization has already owned software, which was processing their data, it is necessary to compare the data transfer to the new system. During this transition often occur cleanups, sorting and unification.

### 1.11.5    Training of users

User training task is to prepare all workers for the test operation.

### 1.11.6    Testing

At this stage simulates real environment and verifies correct operation settings of the system.

### 1.11.7    Filling the initial states

This is the last task before the final start. Often the old software is used during the implementation of the new system and change to the new system will take place from day to day. It is necessary to perform the initial filling state very quickly. This transfer is therefore carried forward.

### 1.11.8    Launch

After start is a supplier of the system available as operational support for users. Through consultants is trying to solve problems operatively. After few days users get familiar with the system and are able to switch into standard mode support.

# 2 Current situation analysis

This part will provide inside look to the ISC VUT Brno. Brief overview organization chart with position description followed by explaining communication structure and currently used IT tools.

## 2.1 Organization background ISC VUT Brno

International Students Club of Brno University of Technology (in Czech "Vysoké učení technické v Brně") in Brno was established in 2004 and in 2007 joined ESN (Erasmus Student Network). ISC VUT is voluntary based organization with main aim to help foreign exchange students during they stay in Czech Republic..
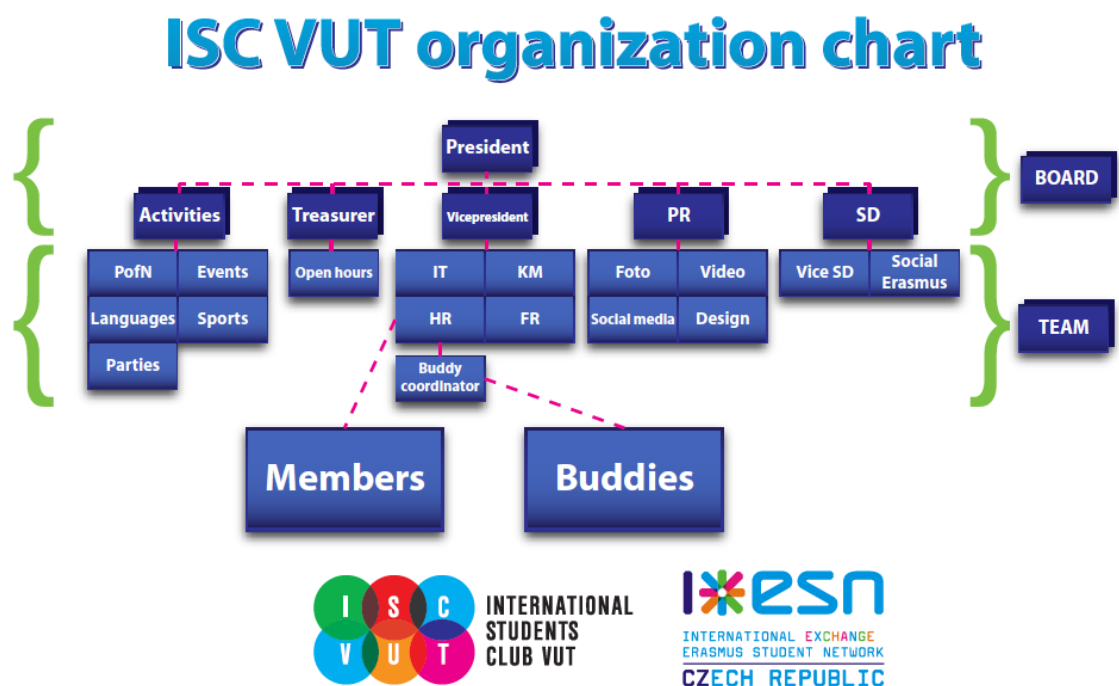
### 2.1.1 Organization structure



**Figure 5: ISC VUT organization chart (ISC VUT Brno 2013)**

## 2.2 Board

Board is the main decision making body of ISC VUT. Board consist of president, vice-president, activities coordinator, treasurer, public relations, and section delegate.

Decision making process is done by voting and absolute majority is needed. In case of draw, president has a casting vote. Board (despite president and vice-president) is elected by members for mandate of one calendar year. President's mandate is one year from July until July. After elections presidents chooses vice-president which needs to be approved by Board.

## 2.3 Team

Team is the main executive body of ISC VUT. Team consists of all members which have a responsibility for certain field of ISC VUT which are divided into smaller teams according to their type of activity. Every smaller team has a board member which is taking care of it.

## 2.4 Board positions description

### 2.4.1 President

- General responsibility for whole functioning of the ISC VUT
- Main contact person for exchange students, rectorate of BUT, Halls of Residence of BUT and other institutions

### 2.4.2 Vice-president

- Responsible for task management and operability of ISC VUT
- In charge of board and general meetings
- Substitutes role of president when is necessary

### 2.4.3 Activities coordinator

- Responsible for activities and events for exchange students
- Creating calendar of events in the beginning of every semester

- Substitutes event leader in case of unexpected circumstances

### 2.4.4 Treasurer

- In charge of finances and inventory of ISC VUT
- Responsible for office hours
- Preparing list of participants of the event

### 2.4.5 Public Relations

- Responsible for maintaining positive image among stakeholders (exchange students, university, local students)
- In charge of internal and external communication
- Promotion of the events on webpage and social media
- Corporate identity of ISC VUT
- Weekly newsletter

### 2.4.6 Section Delegate

- Main contact person for ESN CZ and ESN international
- Represents opinion of the section on National platforms and other statutory meetings of ESN
- Responsible for maintaining good relationship with other organizations with similar activities
- Implementation of international projects on local level
- Coordinating participation in external international projects

| Position | Leader of |
|---|---|
| President | Board |
| Vice-president | Vice-president's team |
| Activities coordinator | Activities team |
| Treasurer | Open hours team |
| Public Relations | Team of Public Relations |
| Section Delegate | Section Delegate's team |

Table 1: Teams division (ISC VUT Brno 2013)

## 2.5 Team positions description

### 2.5.1 Activities team

**Head of Presentations of Nations**

Presentations of Nations - PofN is regular activity which took place in lecture room every Tuesday during semester. Exchange students have possibility to present their country and culture to other students. This may be done via standard presentation with slides but nowadays are students more creative and there is possibility to see custom video, interactive content, competitions or even small theatrical performances.

- Responsibility for lecture room (keys and cleanup)
- Creates schedule of presentations in the beginning of semester
- Collects presentations in advance to avoid technical difficulties on the spot
- Helps during rehearsals

**Event leaders**

Event leaders are selected by Activities coordinator in the beginning of the semester. In some case selection or changes might be done even during semester. Event leader is:

- Main responsible person during that specific event
- Taking care of finances during the event
- Prepares budget and send it to the Activities coordinator and Treasurer
- Prepares necessary steps before the event (ordering of transportation, accommodations, reservations etc.)
- Presentation of the event – rehearsal on the ISC VUT meeting, main presentation during Presentations of the Nations

- Before event prepares list of participants with name and telephone numbers
- During the event makes sure that everything is going according to the plan however small spontaneous activities are allowed if they are not interfering with the general outcome of the event
- Request feedback from the participants in spoken or written/online form
- After the event gives spoken report on the next ISC VUT meeting

**Languages coordinator**

Languages coordinator is responsible for Czech for Fun and Tandem language courses.

Czech for Fun (Czech4Fun, C4F) is a once in a week activity during which exchange students have possibility to learn Czech language and Czech culture. Lessons are held in a friendlier atmosphere that standard language courses.

Tandem language courses are possibility to exchange knowledge of your mother language with another native speaker of the language of your choice.

- Presents possibilities of Czech for Fun and Tandem language courses on the First info meeting
- Creates open call for participants of Czech4Fun
- Responsible Czech4Fun lectures
- Managing Tandem language course pairings

**Sports coordinator**

- Taking care of communication between CESA (Centrum sportovních aktivit v Brně, Centrum of Sports Activities in Brno) and exchange students

- Help exchange students to enrol into the CESA sport courses
- Organizing sport events for exchange students

**Party coordinator**
- Helps with national parties after the presentation of the nations

### 2.5.2 Open hours team

Treasurer with open hours team is responsible for open hours which are currently set two times per week – every Tuesday and Wednesday from 6 pm until 8 pm.

- Providing additional information and help for exchange students
- Managing sign up for events of ISC VUT
- Keeping ISC VUT office clean and representative

### 2.5.3 Vice-president team

**IT responsible**
- Maintaining computers in the office running and updated
- Maintaining website, wiki, information system of ISC VUT
- Communicating with rectorate regarding webhosting issues
- Administrating communication channels of ISC VUT
- Helps members with IT related issues

**Knowledge manager**
- Administrating ISC VUT wiki
- Requesting reports from the events
- Collecting feedbacks of events
- Transferring knowhow from other sections

**Human resources**
- Recruitment process of new members
- Interviews with new members

- Main contact person for new members
- Helps to integrate new members
- Teambuilding activities

**Buddy coordinator**
- Administrating pick-up procedures in the information system if necessary
- Administrating pairing of buddy and exchange student if necessary
- Main contact person for buddy students
- Works closely with Human resources coordinator

**Fundraiser**
- Main contact person for partners of ISC VUT
- Maintaining good relationships with current partners
- Contacting new possible partners

### 2.5.4 Public relations team

Public relations team is responsible for external and internal communication of ISC VUT Brno.

**Foto responsible**
- Main photographer of ISC VUT
- Taking photos during ISC VUT events
- Collecting
- Editing and publishing pictures in ISC VUT gallery and other currently used medias or social networks

**Video responsible**
- Main video maker of ISC VUT
- Taking videos during ISC VUT events
- Editing and publishing videos in ISC VUT video gallery and other currently used medias or social networks
- Creation of video promo material

**Social media coordinator**

- Facebook administrator of ISC VUT page and groups
- Promotion of ISC VUT events
- Viral promo activity
- One to one communication with exchange students

**Designer**

- Creation of promo posters for ISC VUT events
- Creation of graphical materials

### 2.5.5 Section delegate team

**Vice-section delegate**

- Substitutes role of Section Delegate when is necessary
- Promotion of national and international level of ESN among other members

**SocialErasmus**

- implementation of SocialErasmus project on local level
- Main contact person for national and international SocialErasmus coordinator

SocialErasmus is international project of Erasmus Student Network with main aim of integrating exchange students into new community through socially oriented projects and activities.

### 2.5.6 Members

General members of ISC VUT are taking support role in the predefined processes. Members are usually recruited from buddies but it is not compulsory to be a buddy if you want to apply for membership but they are encouraged to participate in ISC VUT buddy system.

### 2.5.7 Buddies

Buddy is a local student which volunteers to help exchange students to integrate into local environment. Further explanation of buddy system is in chapter "Buddy system".

| Team | Team members |
|---|---|
| Board | President<br>Vice-president<br>Activities coordinator<br>Treasurer<br>Public Relations<br>Section Delegate |
| Vice-president's team | Vice-president<br>IT responsible<br>Knowledge manager<br>Human resources<br>Buddy coordinator<br>Fundraiser |
| Activities team | Activities coordinator<br>Head of Presentations of Nations<br>Event leaders<br>Languages coordinator<br>Sports coordinator<br>Party coordinator |
| Open hours team | Treasurer<br>Office hour helpers |
| Team of Public Relations | Foto responsible<br>Video responsible<br>Social media coordinator<br>Designer |
| Section Delegate's team | Vice-section delegate<br>SocialErasmus |

**Table 2: Team members division (ISC VUT Brno 2013)**

## 2.6 Internal Communication structure

Internal communication of ISC VUT is between members and buddies and main aim is to keep information flow about events, activities, open calls or any other important information and it also should create positive social atmosphere which helps to provide sufficient working environment.

Internal communication of ISC VUT is divided into:

| Active | Passive |
|---|---|
| • emails<br>• electronic mailing list<br>• social media<br>• meetings | • newsletter<br>• project management application<br>• wiki (reports, minutes, guidelines cookbooks) |

**Table 3: Internal communication of ISC VUT (ISC VUT Brno 2013)**

## 2.7 Active internal communication

**Emails**

Email server is provided by university however as email client is mostly used Gmail.

For external communication within ISC VUT is strongly recommended to use emails with domain @isc.vutbr.cz as it is provide immediate recognitions and legitimacy.

For internal communication inside ISC VUT are members allowed to use their personal email accounts. Gmail was so far proven as best practice.

List of email addresses which are currently can be found in the table 4. There was created email forwarding from the address prezident@isc.vutbr.cz   to  president@isc.vutbr.cz Due to the confusion between English word "president" and Czech word "prezident". As primary domain email is set info @isc.vutbr.cz.

| Email | Email address |
|---|---|
| General information | info@isc.vutbr.cz |
| President | president@isc.vutbr.cz |
| Vice-president | vice@isc.vutbr.cz |
| Activities Coordinator | activities@isc.vutbr.cz |
| Treasurer | treasurer@isc.vutbr.cz |
| Public Relations | pr@isc.vutbr.cz |
| Section Delegate | sd@isc.vutbr.cz |
| Human Resources | hr@isc.vutbr.cz |
| Buddy Coordinator | buddy@isc.vutbr.cz |
| Presentations of the Nations | presentations@isc.vutbr.cz |
| Fundraising | fr@isc.vutbr.cz |
| IT | it@isc.vutbr.cz |
| Knowledge manager | km@isc.vutbr.cz |
| Languages | languages@isc.vutbr.cz |
| Sports | sport@isc.vutbr.cz |

**Table  4: List of email contacts of ISC VUT (ISC VUT Brno 2013)**

**Electronic mailing lists**

General

- General-isc-vut-brno@googlegroups.com
- Announcement list type
- Used for newsletters and open calls for team positions
- Frequency around one email per week
- Information which are not urgent are cumulated in weekly newsletter
- Reply function is disabled
- Send message is only allowed for president, PR and IT

Buddy

- Buddy-isc-vut-brno@googlegroups.com
- Discussion list type

- Used by buddy to discuss buddy related topics among each other

Team

- Team-isc-vut-brno@googlegroups.com
- Discussion list type
- Discussions, brainstorming, task management
- Elections
- Tips and recommendation

Board

- Board-isc-vut-brno@googlegroups.com
- Discussion list type
- Broader discussions before transferring topic into Team mailing list to keep amount of messages at reasonable levels
- Operative decision making
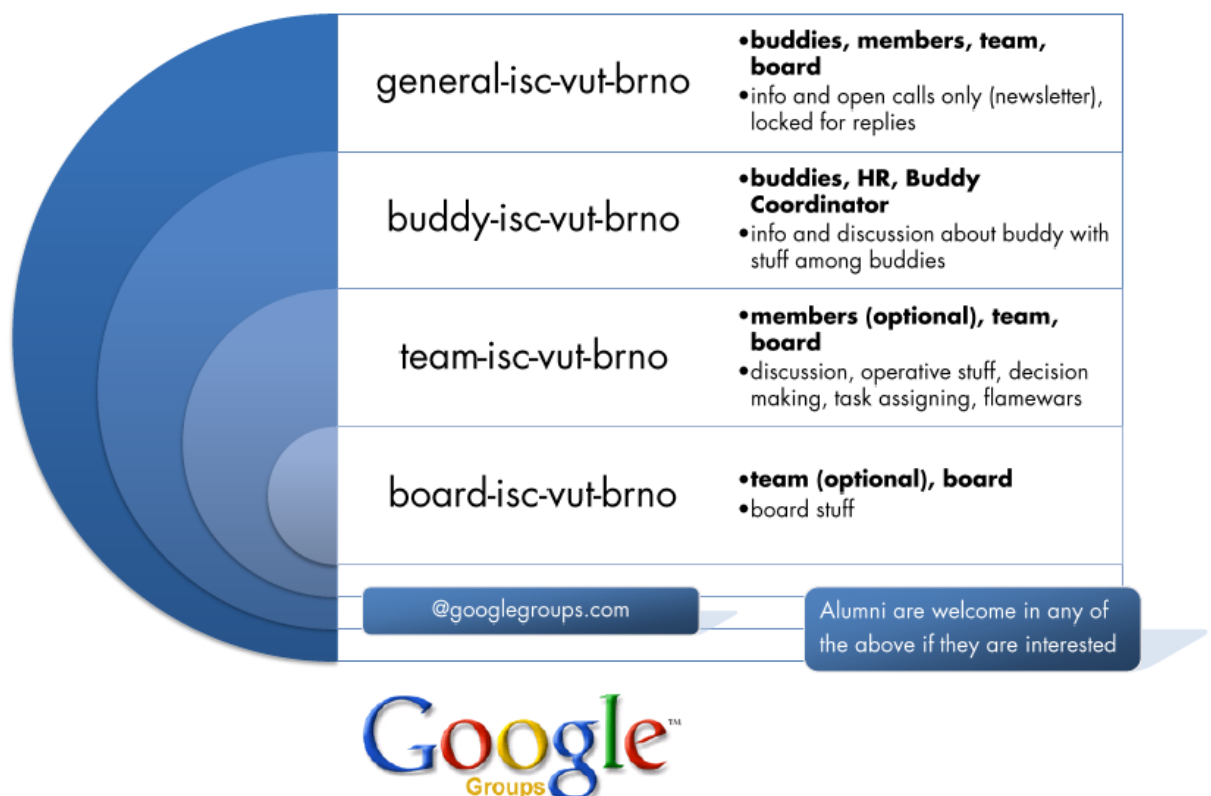


**Figure 6: Electronic mailing list structure of ISC VUT (ISC VUT Brno 2013)**

### 2.7.1.1 Social media

ISC VUT currently uses only Facebook and for internal communication between members and buddies was created Facebook group (facebook.com/groups/isc.vut.group). Members are added automatically buddies are added upon request. Main aim of this group is to create positive social atmosphere.

Originally was intended to share only informal information however Facebook become popular on the level where there are quicker responses for Facebook posts than emails so occasionally urgent messages are send via Facebook posts. This phenomenon applies especially for volunteer student based organization where usually not so strict communication guidelines applied are. Also activity of an individual person on Facebook group is higher than on Google groups mailing list which I personally thinks is because of possibility to delete post/comment which is not possible through email communication.

Types of messages which occurs:

- Questions – regarding ISC VUT, student life etc.
- Photos
- Videos
- Viral internet content
- Tips and recommendations
- Reminders
- Notifications for important emails
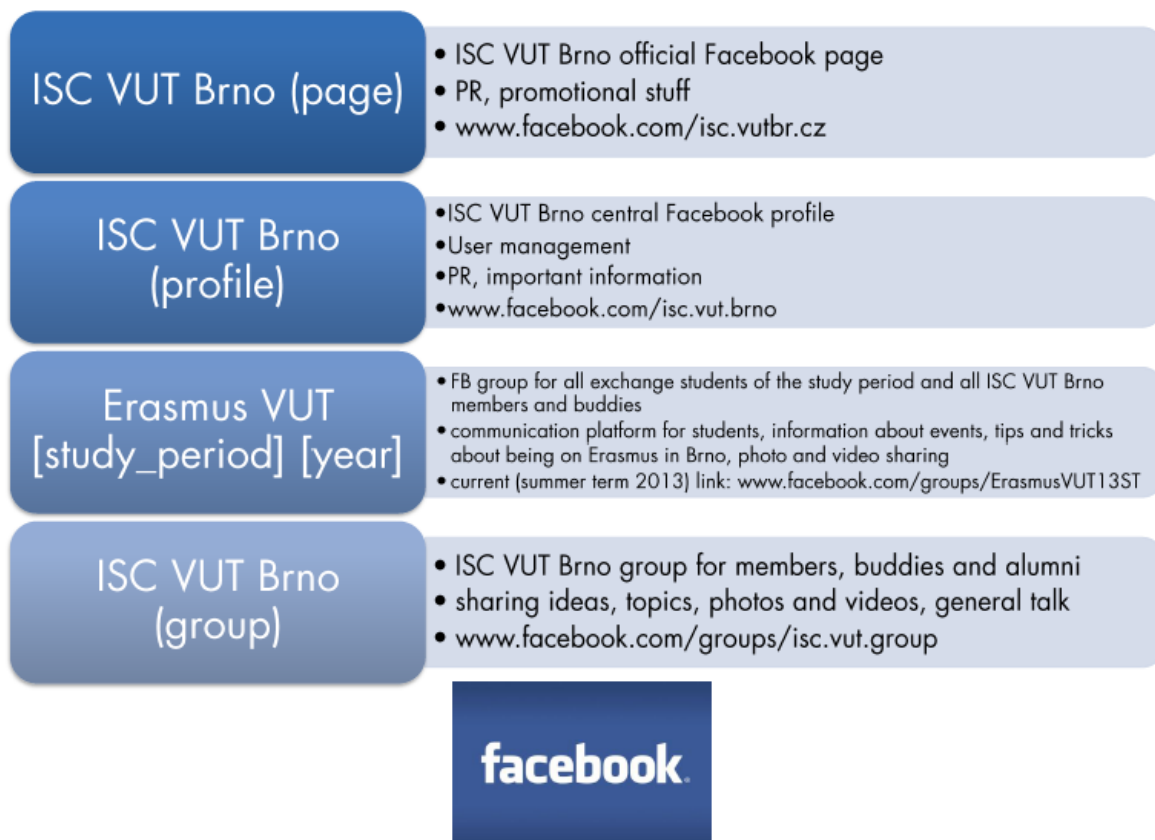
**Figure 7: Facebook communication of ISC VUT (ISC VUT Brno 2013)**

### 2.7.1.2 Meetings

Meetings of ISC VUT are very important part of internal communication as they provide environment for the fastest and most reliable face-to-face communication. Personal meetings also help with group building and forming team spirit of all members.

It was decided to have both meetings at same day, currently Monday was chosen. Board meetings are from 18:00 – 19:30 and general meetings are from 20:00 – 21:00.

Topics are prepared in advance online via shared Google spreadsheet, which is send to board mailing list and as well distributed permanently on Trello card.

There are two types of meetings between members of ISC VUT:

| Board meeting | General meeting |
|---|---|
| • attendance of board members is mandatory<br>• attendance of team members is voluntary<br>• Discussions<br>• Brainstorming<br>• Minor operative decision making<br>• Strategy planning | • attendance of board members is mandatory<br>• attendance of members is mandatory,<br>• attendance for buddies is voluntary<br>• Reports from events<br>• Presentation of future events<br>• Major decision making<br>• Elections |

Table 5: ISC VUT meetings comparison (own work).

## 2.8 Passive internal communication

Passive internal communication in ISC VUT has main purpose of reminding members and buddies about current and upcoming events or other relevant important information and preserving knowledge of ISC VUT.

### 2.8.1.1    Newsletter

Newsletter in ISC VUT is special kind of email which is sent once in a week to the general Google group to notify members and buddies about upcoming events of the week. Newsletter contains information as:

- Upcoming events of ISC VUT
- Open calls for vacant positions in ISC VUT
- Recommendations for trainings, workshops or other personal development related events
- Information about interesting projects, travelling possibilities

### 2.8.1.2 Project management application

Trello is used as project management tool of ISC VUT. Main purpose is to provide on demand information for members about current project and tasks. Workflow of usage of this application was adapted to the needs of ISC VUT and for maximal level of simplicity and user friendliness there is just one board created (TIISC - Tasks Ideas of ISC) where are four lists (Ideas, Tasks – To Do, Tasks – Doing, Tasks – Done).
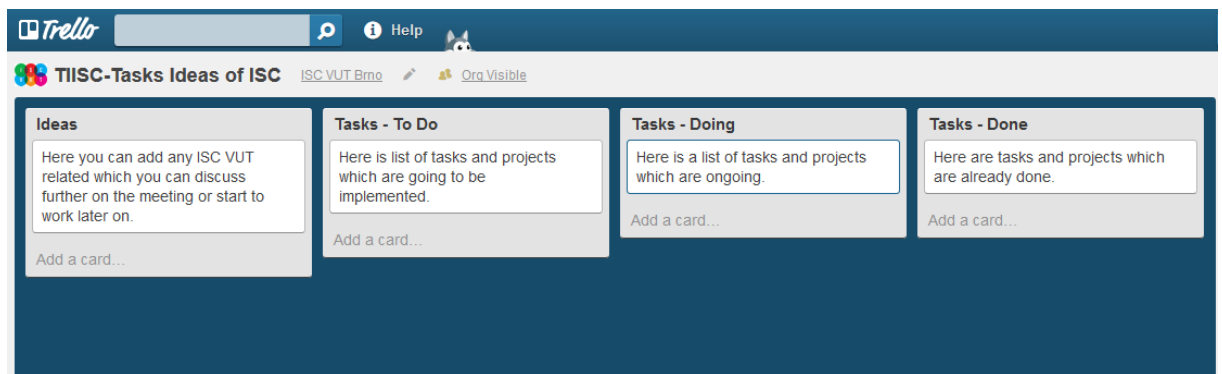


Figure 8: Trello working environment of ISC VUT (Trello 2013)

### 2.8.1.3 Wiki

DokuWiki was chosen as a wiki system of ISC VUT. Main decision criteria were level of simplicity and user friendliness. Goal is preservation of ISC VUT knowledge.

There are stored following documents:

- Reports from the events
- Check list of the events
- Cookbooks for the events
- Minutes from the meetings
- Guidelines of ISC VUT
- Cookbooks of ISC VUT processes

## 2.9 Buddy system

### 2.9.1 Buddy systems at ESN in general

Buddy system is one of the main activities of an ESN section. Main purpose is to help incoming exchange students to easier integrate into the new environment (university, country).

Naming of the buddy systems differ among ESN sections. There are variations like mentor system or tutor system. A tutor is an instructor who gives private lessons so this naming system was rejected immediately. "

| Buddy system | Mentor system |
|---|---|
| • „operate together" Individuals / groups • „help each other" • Social coexistence • Equality between subjects | • „transfer of knowledge" • Greater knowledge of the mentor • Less experienced the protégé • training context |

**Table 6: Comparison of buddy and mentor system (own work)**

It was chosen to use buddy system naming as it fits more to the environment of ISC VUT because word "buddy" in general creates friendlier atmosphere than word "mentor" as it indicates that both sides are equal.

### 2.9.2 Buddy system of ISC VUT

Buddy system is one of the core activities of ISC VUT. These are mandatory activities of a buddy in the time frame of arrival of an exchange student:

| Period | Activity |
|---|---|
| Before arrival | • establishing contact with exchange student • providing additional information regarding school or live in Brno |
| Upon arrival | • providing a pickup service • guiding exchange student from the place of |

| | arrival in Brno to his/her accommodation |
|---|---|
| After arrival | • helping with necessary administration (internet access, VISA, accommodation office), <br> • Czech language translation <br> • providing information upon request |

**Table 7: Mandatory activities of a buddy (own work)**

After fulfilling these activities is buddy student encourage to engage any additional activities with exchange student like sharing local cultural events, travelling or any other activities of course on purely volunteer bases which mostly correlate with mutual understanding and sympathy of both students.

## 2.10 Events

### 2.10.1 Events at ESN in general

Events are one of the core activities of an ESN section. They provide possibility to see local places guided by local students and well creating an environment for social engagement between exchange students.

### 2.10.2 Events of ISC VUT

Events in ISC VUT are divided into four categories:

| Category | Description | Example |
|---|---|---|
| Micro event | • requires low preparation and human resources <br> • can be spontaneous without lager promotion and prior registration <br> • usually some happening type of event <br> • overall risk factor is zero or very low | Snow battle |
| Mini event | • requires a responsible person which makes necessary preparations, reservations but | Opera |

| | | |
|---|---|---|
| | there is no need for additional help, <br> • overall risk factor is low | |
| Medium event | • multiple steps in preparation process <br> • during the event additional human resources necessary <br> • overall risk factor is medium | Brno city rally |
| Big event | • experienced event leader <br> •  major preparation phase <br> • Organized team with predefined tasks and duties <br> • overall risk factor is high | International student ball |

**Table  8: Categories of ISC VUT events (own work)**

Overall risk factor indicates the amount of possible negative PR image impact towards exchange students as well possible financial losses.

### 2.10.3    Event registration process

Event registration is currently done on pen and paper bases. Whole process is done on personal level. Exchange students come to the ISC VUT office during office hours and register for an event. Registration is done by sign up with their name, surname, email address, telephone number to the event spreadsheet.

| PROs | CONs |
|---|---|
| • Low entry cost and requirements <br> • Direct contact with exchange student | • No data backup <br> • Low readability (depends on handwriting) <br> • Low user friendly level <br> • No place reservation possibility <br> • No information about full capacity <br> • No automatic reminders |

**Table  9: Evaluation of event registration process (based on feedback from Open hours team)**

## 2.11 Human resources management

### 2.11.1 Human resources management in ESN at general

Members and buddies are the key factor of any ESN organization. Membership management is usually done by Human Resources Manager, Buddy Coordinators or Vice-president. Process of recruitment may differ among sections but key steps are the same. There are two types of human resources management at ESN:

a. Membership management
b. Buddy management

Some sections also consider buddies as members of the section. For the purpose of this bachelor thesis only the main executive group of people which are in charge of functionality of the section will be considered as members.

### 2.11.2 Human resources management of ISC VUT Brno

Human resources management in ISC VUT Brno is done by Human Resources Manager. There are two types of recruitment:

a. Bulk recruitment – higher amount of applicants, active promotion campaign through emails via Faculty mobility coordinators
b. Continual recruitment – individuals, passive promo campaign through posters, website

Target group are usually students which are coming back from mobility studies or are interested in it.

### 2.11.3 Membership management of ISC VUT Brno

Recruitment of new members is done continually through semester. Process is done with support of Google forms and email.

Process of recruitment:

Applicant: writes email to hr@isc.vutbr.cz -> HR: replies with link to the Google form -> interview -> copying information to the another spreadsheet named " List of members"

## 2.12 Evaluation

Evaluation of currently used tools and processes which conclusion tools is necessary to implement into the new information system and which might be outsourced to already existing services.

| Process | Currently used platform | Level of satisfaction |
|---------|-------------------------|-----------------------|
| Communication | Gmail, Facebook | Very satisfied |
| Membership management | Google Form, Spreadsheet | Not satisfied |
| Buddy system | N/A | Very not satisfied |
| Event registration system | Pen and paper | Very not satisfied |
| Knowledge management | DokuWiki | Very satisfied |
| Task management | Trello | Satisfied |
| File storage | Dropbox, Google Drive, DokuWiki | Very satisfied |

**Table 10: Evaluation of currently used tools (based on Board meeting feedback)**

From the previous table is eminent that new IS have to cover processes of membership management, buddy system and event registration system.

# 3  Proposal

In this part I will describe proposal for the information system by defining relation variables and processes which should be implemented in the information system for ESN section.

Based on the data from Section questionnaire 2012 done by ESN (ESN AISBL 2013) we can see that more than half of the people which are responsible for IT in the sections do not have necessary skills for their own development or installation of standalone version of IS. Therefore I would recommend making the information system as web based service. This approach would be very user friendly and easy to implement for a new section.

## IT responsible - level of experience in section

- ■ über (owns/works at IT company)
- ■ expert (development of own software)
- ■ advanced (customizing existing platforms)
- ■ basic (using basic tools without customization)
- ■ none

5%
11%
47%
28%
9%
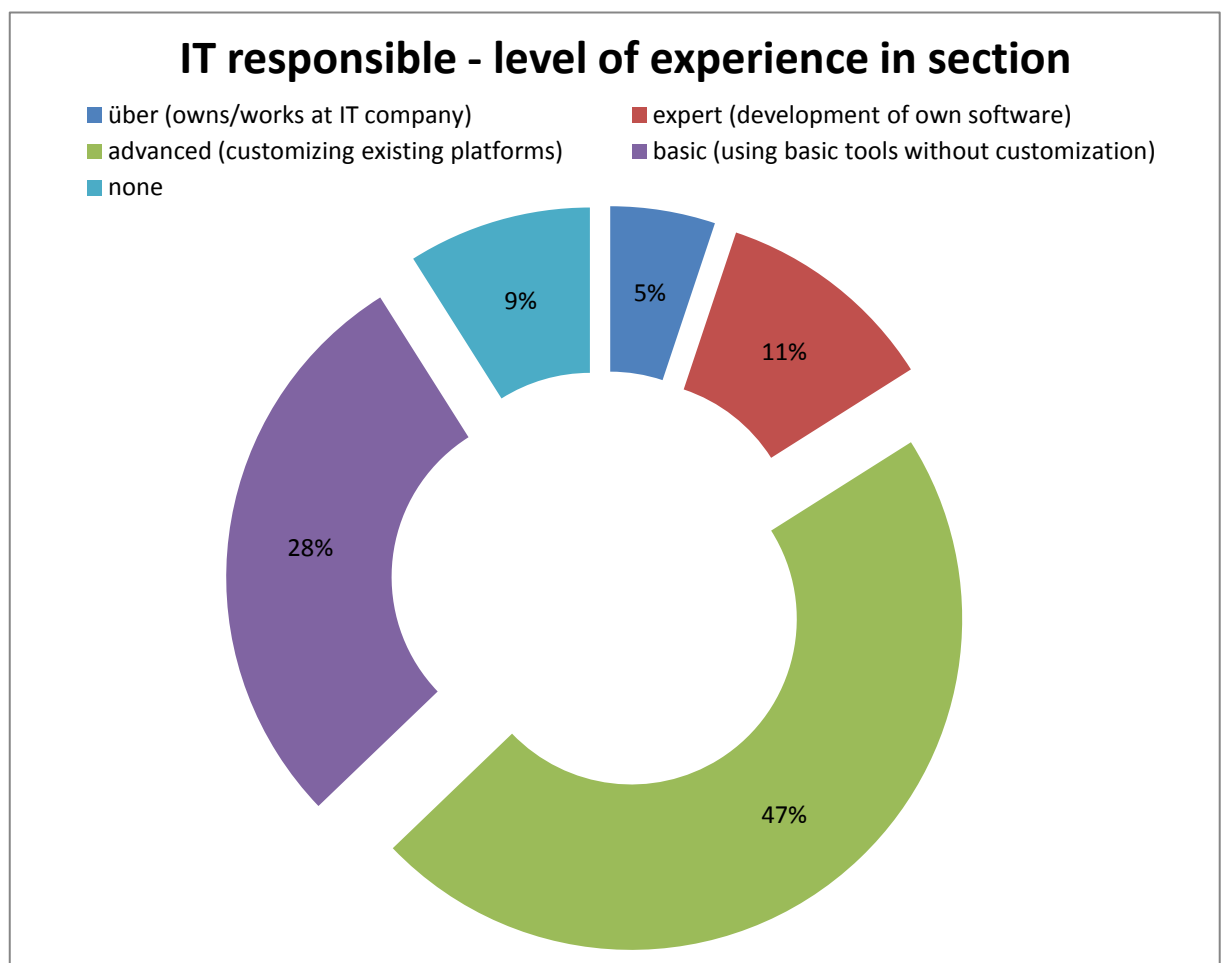
**Figure 9: Level of experience of IT responsible in ESN sections (ESN AISBL 2013)**

## 3.1 Database
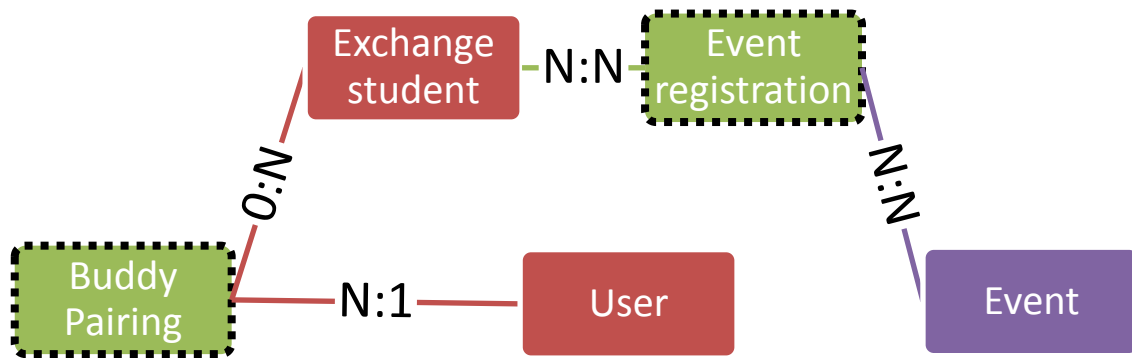
### 3.1.1 Relation variables

a. User
b. Exchange student
c. Event

Member and buddy are combined into the relation variable "user" to avoid duplicity in the database.

### 3.1.2 User attributes

#### Personal information

| Attribute | Description |
|---|---|
| Name | |
| Surname | |
| Gender | |
| Date of birth | indicates amount of experience, helps HR to predict membership cycle (newbie -> alumni), also helps to plan joint birthday parties which empowers team dynamics |
| Email address | main virtual communication contact, needed for user account management in IS |
| Telephone number | used for urgent communication, also if case of difficulties with email communication |
| Picture | Visual knowledge of members generate better social environment inside section, personal picture helps new members to learn quicker names of current |

| | |
|---|---|
| | members and vice versa, Facebook has been proven ineffective because of data inconsistency (people are using nick names or random characters instead of their names, profile pictures are random images or group pictures) |

**Table 11: User attributes - personal information**

## Study information

| Attribute | Description |
|---|---|
| HEI (university) | Higher Education Institution/university, required when section is managing operating over multiple universities |
| Faculty | faculty which is person studding, filed of studies give a basic perspective of experience member can already have, also can be use as criteria for buddy pairing |
| First year at HEI | helps HR to predict membership cycle (newbie -> alumni) |
| Last year at HEI | expected last year at HEI/university |

**Table 12: User attributes - study information**

## Section information

| Attribute | Description |
|---|---|
| Position at section | describe which field of activities is member currently engaged |
| Personal note | text field in which member express his/her personality, recommended is to write relevant information like |
| HR note | text field which will be visible only to HR/advance users, possible to add comments, e.g. after interview, if a person is expelled |
| Applicant note | text field with motivational letter sent during applicant registration |
| Buddy limit | amount of exchange students which is allowed to have assigned to buddy for achieving equal redistribution of exchange students among buddies |
| Buddy preferences | countries which buddy prefers, usually is countries where buddy wants to go or already been |

| | |
|---|---|
| for mobility studies |  |

**Table 13: User attributes - section information**

### System information

| Attribute | Description |
|---|---|
| Login name | unique user name for purpose of log into the system |
| Password | for validation of the user |
| Account status | active/inactive, might be changed manually by super user |
| Account validity | time until will be account active, for buddy is usually one semester or one year and after they can ask for prolonging |
| Account type | buddy, member, buddy + member, admin, super admin |

**Table 14: User attributes - system information**

## 3.1.3 Exchange student attributes

### Personal information

| Attribute | Description |
|---|---|
| Name |  |
| Surname |  |
| Gender |  |
| Birth date | some event and trips require insurance which differs if a person is over 26 years old |
| Mobile phone number home | home including country code, very useful for pick up upon arrival or during the trips or events |
| Mobile phone number local | after arrival students usually obtain local SIM card, to avoid roaming charges |
| Picture | personal photography helps buddy to indentify person upon arrival, during events and trips is helpful for identification of a missing person |

**Table 15: Exchange student attributes - personal information**

### Study information

| Attribute | Description |
|---|---|
| Country of sending institution | during buddy paring process buddies have preferences for exchange students from countries on which they want to go for mobility studies so |

| Attribute | Description |
|---|---|
| | they can already obtain some knowledge about the country, or countries they have already been so they have things in common |
| Sending institution (HEI, University | gives possibility to pair buddy with exchange student of the school which buddy would like to go for mobility studies |
| Semester | winter/summer/year, helps to keep statistics about number of students for current semester |
| Hosting faculty | used as pairing criteria in case is needed, local student of the same faculty as exchange student might provide more valuable information regarding studies etc. |

**Table 16: Exchange student attributes - study information**

### Pick up information

| Attribute | Description |
|---|---|
| Arrival date and time | helps to arrange pick up service, some buddies are not living in the city of their studies so they might need to arrange earlier coming |
| Place of arrival | place of arrival to the city (bus station/train station/airport |
| Accommodation | dormitory, other/flat, place of accommodation, helps to plan travelling for pick up |
| Do you want pick up service? | Pick up service is voluntary, exchange students are adult people and here is marked if they are interested in it or not |
| Pick up note | here can exchange student write additional notes regarding his/her arrival, e.g. arrival date might change, I am arriving with group of other people |

**Table 17: Exchange student attributes - pick up information**

### Buddy system information

| Attribute | Description |
|---|---|
| Do you want buddy? | Buddy system is voluntary and if exchange student do not want a buddy it should not be assigned to him/her automatically because it might create decrease motivation of buddy, both sides should express active agreement that they want to participate in the buddy system (buddy by applying, exchange student by choosing YES at "Do you want buddy?" question during registration) |

| Attribute | Description |
|---|---|
| Buddy note | here exchange student write some basic introduction about him/herself, hobbies, interest, this information helps during pairing process to pair people which have things in common to empower future cooperation between buddy and exchange student |

**Table 18: Exchange student attributes - buddy system information**

### Other information

| Attribute | Description |
|---|---|
| Do you know ESN? | Answers YES/NO/I am member, first two answers are statistical and helps to predict if an additional presentation about ESN is necessary in the beginning of the semester, third answer gives section possibility to include foreign ESNers into their activities |
| ESN card number | ESN card is distributed by ESN section to provide exchange students recognition, free entrance or discounts for the partners of the section |

**Table 19: Exchange student attributes - other information**

### 3.1.4 Event attributes:

| Attribute | Description |
|---|---|
| Title | |
| Event leader | possible to select from the database of members |
| Capacity | maximum amount of registered exchange students |
| Price | |
| Event date | date and time on which event starts |
| Reservation deadline | time until is possible to make reservation for spot at the event, after that time are all reservations cancelled and spots are available again for everybody |
| Registration start | time from which is possible to register exchange students, usually sets around two weeks before the event date |
| Registration deadline | time until is possible to register for the event, usually is set around 3 days before the event date |
| Reminder note | possibility to enter variable text, which will be send in the reminder email 24h before the event |

**Table 20: Event attributes**

## 3.2 Modules

Modules will describe independent parts of the system which may be shown or hidden depending on the user rights. There will be four modules:

a) System module
b) User module
c) Buddy module
d) Event module

### 3.2.1 System module

- **Homepage**                landing page after the user log in, contains basic description of functionalities, links for other platforms which is section using
- **Edit homepage**        available only for admin
- **Account settings**      possibility to edit user data, allow/disable features of the system
- **About**                      history of the system, tracking of improvements
- **Logout**

### 3.2.2 User module

- **Member list**                database of members
- **Buddy list**                  database of buddies
- **Applicant member list**    list of pending application for membership waiting for approval
- **Applicant buddy list**      list of pending application for buddy, waiting for approval
- **Statistics**                  basic statistics for the section, amount of members, buddies,
- **Export data**              possibility to export data to spreadsheet which gives possibility for deeper analysis

### 3.2.3 Buddy module

- **Buddy pairing**            list of available exchange students which do not have assigned buddy student, here can buddy browse through and read buddy notes, amount of visible information will be limited to prevent any misuse of contact details or selection base on visual preferences

- **My buddy list** list of exchanged students which are assigned to buddy with contact detail and picture
- **Exchange students list** list of all exchange students with contact details
- **Statistics** basic statistics for the section about amount of exchange students
- **Manual pairing** available only for HR, buddy coordinator, possibility to manually pair buddy with exchange student
- **Export data** possibility to export data for more advanced analysis

### 3.2.4 Event module

- **Event list** list of all events of the section
- **Add event** possibility to create new event
- **Print participation list** list of participants with alphabetical order of participants with telephone numbers
- **Export data** possibility to export data for analysis

## 3.3 Forms

Five forms for data entry will be needed:

a) Member applicant form
b) Buddy applicant form
c) Exchange student registration form
d) Event form
e) Event reservation form

### 3.3.1 Member applicant form

| Name | Type | Features |
|---|---|---|
| Name | text | |
| Surname | text | |
| Email address | text | have to contain "@" and "." |
| Telephone number | text | |
| HEI (university) | list box | list of universities on which is section operating |
| Faculty | list box | list of faculties of university selected in HEI (university) |
| First year at HEI | list box | scale from -10 years from current year until current year and option "Other" |
| Last expected year at HEI | list box | scale from  current year to +10 years and option "Other" |

| Applicant note | text field | motivation letter, limitation of 1000 characters |

**Table  21: Member applicant form**

### 3.3.2 Buddy applicant form

| Name | Type | Features |
|---|---|---|
| Name | text | |
| Surname | text | |
| Email address | text | have to contain "@" and "." |
| Telephone number | text | |
| HEI (university) | list box | list of universities on which is section operating |
| Faculty | list box | list of faculties of university selected in HEI (university) |
| First year at HEI | list box | scale from -10 years from current year until current year and option "Other" |
| Last expected year at HEI | list box | scale from  current year to +10 years and option "Other" |
| Applicant note | text field | limitation of 500 characters |
| Buddy preferences | list box | countries which buddy prefers, usually is countries where buddy wants to go or already been for mobility studies |

**Table  22: Buddy applicant form**

### 3.3.3 Exchange student registration form

| Name | Type | Features |
|---|---|---|
| Name | text | |
| Surname | text | |
| Gender | list box | male, female |
| Birth date | calendar | cannot select date before current date |
| Address | text | |
| Contact email | text | have to contain "@" and "." |
| Mobile phone number home | text | |
| Photo | file | limited file size, file type *.jpg, *.png |
| Country of sending institution | list box | countries of the world and option "other" |
| Sending institution (HEI, University) | text | |
| Semester | list box | winter, summer, whole year |
| Hosting institution (HEI, University) | list box | list of HEIs, Universities where section is operating |
| Host faculty | list box | list of faculties based on selection of hosting institution |

| | | |
|---|---|---|
| Arrival date and time | calendar | |
| Place of arrival | list box | list of arrival places in city (e.g. bus station, airport) |
| Accommodation | list box | dormitories and option "Other" |
| Do you want pick up service? | list box | yes or no |
| Pick up note | text field | |
| Do you want buddy? | list box | yes or no |
| Buddy note | text field | |

**Table 23: Exchange student registration form**

### 3.3.4 Event form

| Name | Type | Features |
|---|---|---|
| Title | text | |
| Event leader | text | possibility to find in the database of members |
| Capacity | number | If capacity=amount of registered participants than stop allowing reservation/registrations |
| Price | number | |
| Event date | calendar | |
| Reservations deadline | calendar | |
| Registration start | calendar | |
| Registration deadline | calendar | |
| Reminder note | text | |

**Table 24: Event form**

### 3.3.5 Event reservation form

| Name | Type | Features |
|---|---|---|
| Unique tudent identification | text | student number, ESN card number |
| Event | list box | list of events between dates "Registration start" and "Registration deadline", if capacity is reached, stop enabling possibility to reserve |

**Table 24: Event registration form**

## 3.4 Description of processes

### 3.4.1 Member recruitment

**Member applicant** – person, which is applying for membership in the section.

**HR** – coordinating person from the section, this is in charge of human resources process. This mainly includes recruiting and teambuilding.

1. Applicant fills in the *membership application form*
2. HR gets *notification email* that new applicant form has been submitted
3. HR reviews applicants entry and decides wheatear to have interview with applicant or not
4. After the successful interview member applicant is confirmed as a member and HR transforms his/her applicant form into member user account
5. Applicant gets *notification* that his/her *new user account* has been created
6. HR sends *welcome email* to member applicant (new member)

Process might be terminated in step 3 in case of sufficient member base or 4 in case of unsuccessful interview.

**Member applicant form** is placed on section's website under Membership -> Membership application form.

**Notification email** is triggered after submission of membership application form.

**New user account notification** is generated by the system and contains login name, password and link to the information system. It also notifies user that password should be changed after the first login.

**Welcome email** is sent by HR section representative and contains welcoming paragraph followed by small guide for new member, with information about upcoming meeting and links/materials with information about section.
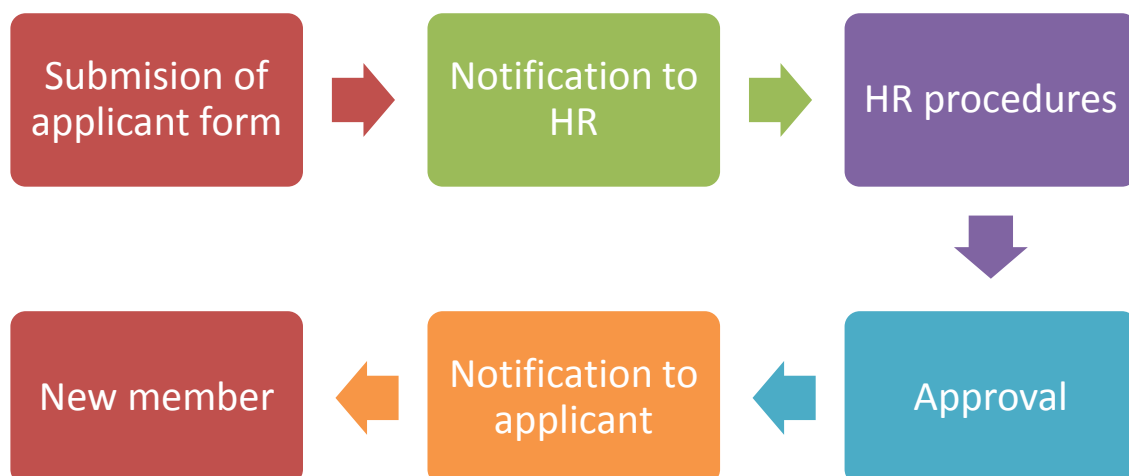
**Figure 11: Member recruitment**

### 3.4.2 Buddy registration

Buddy applicant – person, which is applying for buddy system of the section

Process buddy registration is similar to member recruitment and depends on section HR policy (requirement of an interview, motivational letter or they are accepting all applicants).

### 3.4.3 Exchange student registration

Exchange student – student coming for mobility studies into the university (HEI)

1. Exchange student receives *information email from mobility coordinator* about the section and registration.
2. Exchange students receive *information email from president of the section* about the section and registration.
3. Exchange student fills in *exchange student registration form*.
4. Exchange student receives confirmation that registration was successful with summary of data that he has provided and link for *exchange student edit form*.

**Information email from mobility coordinator** is send by mobility coordinators which are taking care about study matters of

the mobility studies. After the successful registration for mobility studies on hosting university (HEI) is send email with basic info about section and link for registration. Best practice is that first information about the section is coming from mobility coordinators to prove credibility of the section towards university (HEI).

**Information email from president of the section** after the section receives contact details of all exchange students. Email contains basic information about beginning of the semester, link for further information and reminder about the registration.

**Exchange student registration form** is available on the section website at Info for incoming -> Exchange student registration form.

### 3.4.4 Pairing process buddy with exchange student

1. Buddy logs into the information system and choose buddy pairing.
2. Buddy chooses an exchange student.
3. Exchange student's contact details appear in his/hers "Buddy list page" and confirmation email is send to buddy.
4. Buddy sends first email to exchange student.
5. Reminder email is send to buddy 24h before arrival of exchange student if pick up was requested.

During buddy pairing is amount of exchange student's data limited to avoid any misuse of the information system such as dating service or other behaviour which is against ESN values.

Recommended amount of visible data (based on best practice of ISC VUT Brno):

- Country of sending institution
- Sending institution (HEI, University)
- Host faculty
- Arrival date and time
- Place of arrival
- Dormitory

- Do you want pick up service?
- Pick up note
- Do you want buddy?
- Buddy note

### 3.4.5 Event creation

**Event** – trip, excursion etc. organized by section

**Activities coordinator** – person responsible for activities and events of the section

1. Activities coordinator log into the information system and selects "Add event"
2. Activities coordinator creates event by specifying all necessary event attributes in appropriate form
3. Activity coordinator notifies particular event leader that his/her event was created in the system

### 3.4.6 Event reservation

1. Exchange student fill in *event reservation form*  By specifying identification information and event that he wishes to attend
2. Exchange student selects event on which he/she wants to reserve spot.
3. Exchange student receive confirmation email that he/she reserved spot for selected event.
4. Exchange student now continues with event registration process.

**Event reservation form** is on the section website for user friendly access. Event is listed in event reservation form from the time of "Registration start" until "Registration deadline".

Maximum amount of reserved spots is defined by capacity of the event. Reservation deadline" is the time from which are spots no longer reserved and they are again available for everybody on the first come first serve basis.

Best practise shows that "registration start" is good to set at least two weeks before event date and "reservation deadline" one

week before event. Such dates mainly depend on nature of each event and its requirements for organization complexity.

### 3.4.7 Event registration

1. Exchange student comes to the office during the office hours.
2. Exchange student writes personal information on event registration paper.
3. Exchange student is marked as event participant in the event registration system module.
4. Exchange student receives information email that confirms his payment for the event
5. Exchange student receives *reminder* 24h before event.

## 3.5 User groups

User group define access to the modules of the information system and also amount of visible data as well possibility to edit or export data.

| | Buddy user | Member user | Advance member | Admin |
|---|---|---|---|---|
| **System module** | Account settings<br>Logout | Homepage<br>Account settings<br>Logout | Homepage<br>Account settings<br>About<br>Logout | System module<br>Homepage<br>Edit homepage<br>Account settings<br>About<br>Logout |
| **User module** | Member list (basic view)<br>Buddy list (basic view) | Member list<br>Buddy list | Member list<br>Buddy list<br>Member applicant<br>Buddy applicant | Member list<br>Buddy list<br>Member applicant<br>Buddy applicant |
| **Buddy module** | Buddy pairing<br>My buddy list | Exchange students list (basic view) | Buddy pairing<br>My buddy list<br>Exchange students list<br>Manual pairing | Buddy pairing<br>My buddy list<br>Exchange students list<br>Manual pairing<br>Export data |
| **Event module** | | Event list | Event module<br>Event list<br>Add event<br>Print participation list | Event list<br>Add event<br>Print participation list<br>Export data |

**Table 25: User groups modules visibility**

# Conclusion

The goal of this bachelor thesis was to design information system for ESN section process management, which will make section more effective.

For analysis of current situation, I used my home section ISC VUT Brno as model section for describing processes. Based on this analysis, I was able to form proposal of the information system. Than this system was implemented in the ISC VUT Brno and tested for one year with no major complications.

Highest added value was noticed from buddy system pairing method, which enables very individual pairing and increase mutual motivation for cooperation of buddy and exchange student. Online registration system saves time and increase transparency in case of overbooked events. Member database provides internal social platform, which enables faster integration of new members. System proved itself to be stable and ready to be implemented to other sections.

During the ESN international events, such as Annual General Meeting, Council of National Delegates, Council of National Representatives I was confronting my ideas and feedback from testing with the best practises from other sections and I came to conclusion that there is no standard described how the core processes of ESN section should look like.

In order to be able to share such information system with other sections, we have created "Project SectionBox" (SectionBox 2013). Project is based on combining description of processes from sections and implementing them into the system.

This should set up a basic quality standard for Erasmus care provided by ESN section. Also helps to continuously upgrade system by implementing new features, which might come with

every new section. All the time and human resource savings can be invested into providing better services to exchange students and further section development.

European Commission for education, training, youth and sport made a proposal by for the new programme "Erasmus for all" for the period of 2014-2020 with significant increase of funds allocated for the development of knowledge and skills (European Commission 2013, p. 12).

In the Erasmus Charter for Higher Education 2014-2020 is stated: "*It is strongly recommended that the receiving institution establishes a student network, such as an ESN (Erasmus Student Network) section which could run the buddy system and share good practice with other sections around Europe.*" (European Commission 2013).

These are the main indicators that Erasmus Student Network will continue its functionality and even take care about increased numbers of exchange students. Therefore this information system might be very helpful providing more professionalization and effectiveness to all sections.

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