

The Hitchhiker's Guide to

ESUG 2005
Brussels

Program Overview

ESUG 2005

Before the Conference

Saturday
all day
Camp Smalltalk

Sunday
all day
Camp Smalltalk

Monday
all day
Camp Smalltalk

Evening Events

Tuesday
18:30
Welcome Reception

Wednesday
17:30
Chocolate Degustation

Thursday
19:00
Banquet

	Tuesday	Wednesday
09:00	Registration	Scrum: Mastering your Processes Joseph Pelrine
09:15		
09:30		
09:45		
10:00	Welcome	
10:15		
10:30	Coffee Break	
11:00	Smalltalk and Hardware Bernard Pottier	Advanced Seaside (1) Lukas Renggli
11:15		
11:30		
11:45		Seaside Unit David C. Shaffer
12:00	Typing the Image Roel Wuyts	
12:15		
12:30	Lunch	
13:30		
14:00	Research Conference	WithStyle Rowan Bunning
14:15		
14:30		
14:45		
15:00		Tools for Intensional Views Frédéric Pluquet
15:15		
15:30	Coffee Break	
16:00	Research Conference	Cooking with SUnit Joseph Pelrine
16:15		
16:30		
16:45		
17:00		
17:15		
	(till 18:30)	



Program Overview

	Thursday	Friday	Saturday
09:00	OmniBase David Gorisek	Gemstone 64 Adriaan van Os	Etoys 2 Michael Rüger
09:15			
09:30			
09:45	Rule-driven Work- flow Enactment Adriaan van Os and Tim Verwaart	Squeak as a P2P Platform Cees De Groot	SqueakBot Serge Stinckwich
10:00			
10:15			Etoy Experiences Report Rita Freudenberg
10:30	Coffee Break		
11:00	SmallWiki 2 Lukas Renggli	Business Benefits and Risks of SOA Andy Berry	Bots Inc. Stéphane Ducasse
11:15			
11:30			
11:45	Understanding your code assets with Moose Tudor Girba	Business in Cincom Smalltalk Suzanne Fortman	ComiKit Mikael Kindborg
12:00			
12:15			Educator Track Wrapup
12:30	Lunch	Lunch	
13:30	Social Event Guided Tour of Brussels	VA Smalltalk Going Forward Mark Johnson	Gemstone to C# Kirk Blackburn
14:00			
14:15			
14:30			
14:45			
15:00			
15:15	Social Event Visit to Cantillon Brewery	Aggregating the Commentary James Robertson	The Squeak VM: Exploring GC John McIntosh
15:30			
16:00			
16:15			
16:30			
16:45			
17:00	Advanced Design Discussions		Goodbye
17:15			

(till 18:00)

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Welcome to ESUG 2005!

It is with great pleasure that we welcome you to what is already the thirteenth edition of the annual European Smalltalk Users Group Joint Event. Started in 1993 as a summer school, the ESUG Joint Event has over the years matured into a combination of a "Camp Smalltalk" event and a conference featuring tracks focussed on the use of Smalltalk in business, research and education. This year's event is no exception and once again features a strong technical track with cutting-edge software technologies and research based on Smalltalk. Whether your background is in academia or industry, we hope you feel welcome to join us for some Smalltalk hacking at Camp Smalltalk or listening to the in-depth talks during the conference!

If you've attended all previous ESUG events, this will be at least the second time you find yourself in Belgium. This year's location has much to offer if you want to extend your stay beyond the conference: as the capital city, Brussels is home to the royal family and their palaces, several national museums, parks, shopping streets etc. and the city is known for its interesting mix of architectures. At the social event on Thursday, we'll take you for a tour around the city and a visit to a brewery to see how some of that famous Belgian beer is made and what it tastes like.

We'd like to thank the organizations listed below for their help in making this year's event possible, and we wish you an inspiring ESUG 2005!

The ESUG Organizing Team



Public Transport within Brussels

The MIVB/STIB provides the public transport network within Brussels. The arteries of the network are three metro lines, or two depending on how you look at it: lines 1a and 1b share part of their route in the heart of Brussels. The remainder of the network is provided by busses and trams, and underground trams known as the “premetro” network. For more information, check out the website www.mivb.be (French and Dutch only).



To get from the hotel to the university campus, you should head for metro station “Sint Katelijne” or “De Brouckere” (see map on page 26). A ticket for 10 rides is provided in your conference pack, but if you need additional tickets you can buy them from the vending machines. Don’t forget to have your ticket stamped in one of the “orange machines” before taking the stairs down to the platform labeled “1a H.-Debroux / 1b Stockel”. You should take the metro “1a H.-Debroux”, watch out that you do not get on a “1b” metro. It’s about a 10 minute ride to metro station Pettillon where you should get off. From there head for the exit in the direction in which the metro was driving, then turn right and follow the Vrijwilligerslaan to the campus, it’s about a 5 minute walk (see map for the area Waerse Steenweg on page 24).



Once you reach the campus, follow the red arrows on the campus map on the back of this guide to building Q where the conference is held, or go to the entrance between building E and F for Camp Smalltalk.

Taxi

A list of taxi companies and their phone numbers is included in the back of this guide. To take a taxi to the university, just give the driver the address below. To take a taxi from the university, you need to tell the driver to pick you up at the campus at exit 13, it’s indicated on the campus map.

Hotel

Astrid Centre Hotel Brussels
Zaterdagplein 11
B-1000 Brussels
+32-2-219.31.19
www.astridhotel.be

University Campus

Vrije Universiteit Brussel
Pleinlaan 2
B-1050 Elsene
www.vub.ac.be

As in previous years, the ESUG conference is preceded by a Camp Smalltalk event. Camp Smalltalk gives you a chance to help enhance the Smalltalk environment and work with others on interesting Smalltalk projects while sharpening your coding skills and perhaps even picking up a few new tricks!

Location and Hours

Camp Smalltalk is held at the university campus in the computer rooms on the first floor in building E. The entrance is located between building F and E; a map of the campus is provided at the back of this guide.

The Camp opens at 9:00. There is no official closing time and arrangements have been made so that you can stay in the rooms until the wee hours of the morning. But if you don't want to have to take a taxi back to the hotel, we advise you to head for metro station Petillon at 23:00, there are only three more trains back to the hotel then (at around 23:18, 23:38 and 23:58) and the last one doesn't always show up.

Food at Camp Smalltalk

Please keep in mind that no lunch is provided during Camp Smalltalk. The "Eating" section of this guide lists a number of restaurants in the neighborhood of the university campus. The section also lists a few takeaway restaurants if you want to get something to eat while you continue your coding session.

There's a Colruyt supermarket near the campus at the Triomflaan, across the street from building Z (10:00 - 20:00, closed Sunday and August 15th). In the Waverse Steenweg area, there's also a Deli Traiteur across the street from metro station Petillon (08:00 - 22:00, closed Tuesday), and a night shop across the street from restaurant Aquarium.

Note that there aren't many ATMs near the campus, the closest one is at the Fortis Bank at Boondaalsesteenweg 466 (close to restaurant nr. 4 on the bottom map on p. 24). Most restaurants accept VISA, but if you need cash, you'd best get it from an ATM in the city centre before coming to the conference, there's one near the hotel at the crossing of Bisschopsstraat and Anspachlaan.

Tuesday: Technical Track

ST and Hardware: The Past, Present and Future

Bernard Pottier

11:00 - 12:00

Typing the Image

Roel Wuyts

12:00 - 12:30

RoelTyper is an extremely fast optional pluggable type system for Smalltalk, based on heuristics. It type-checks instance variables of classes. Typing a complete VisualWorks Smalltalk image takes less than one minute and a half! For this speed you get the types for about 80% of instance variables in the system. The approach is quite similar to what the Refactoring Browser does, but somewhat more refined. This talk delves into the implementation details for the VisualWorks and Squeak versions, and ends with a (fast) demo of the system.

Tuesday: Research Conference

Open Aspects

Robert Hirschfeld and Stefan Hanenberg

14:00 - 14:30

Open Aspects are our approach to face unplanned changes in systems that are based on aspect-oriented composition at runtime. They support explicit adaptation models, allowing developers to describe system change events to be observed, and corrective actions to be taken. These events and actions cover both the base system affected by aspects as well as the aspects affecting the base system themselves. The proper combination of change events and corrective actions allows for conditional just-in-time runtime re-composition. This paper offers a detailed discussion of difficulties related to change in aspect-oriented systems and a description of consistency constraints inherent to them. An implementation illustrating Open Aspects and their application is provided.

Towards Unified Aspect-Oriented Programming

Noury Bouraqadi, Abdelhak Seriai and Gabriel Leblanc

14:30 - 15:00

Aspect-Oriented Programming (AOP) is a paradigm that aims at improving software modularization. Indeed, aspects are yet another dimension for structuring applications. The notion of aspect refers to any cross-cutting property. This definition encompasses both functional (business) and non-functional (infrastructure)

properties. However, most approaches for AOP focus on only one category of aspects: either functional aspects or non-functional ones. This paper aims at bridging the gap between those two families. We present a solution for describing both functional and non-functional aspects in a uniform fashion. This solution relies on reflection and mixin-based inheritance.

Inter-Language Reflection

Kris Gybels, Roel Wuyts, Stéphane Ducasse and Maja D'Hondt 15:00 - 15:30

Meta programming is the act of reasoning about a computational system. For example, a program in Prolog can reason about a program written in Smalltalk. Reflection is a more powerful form of meta-programming where the same language is used to reason about, and act upon, itself in a causally connected way. Thus on the one hand we have meta-programming that allows different languages or paradigms to be used, but without causal connection, while on the other hand we have reflection that offers causal connection but only for a single language. This paper combines both and presents inter-language reflection that allows one language to reason about and change in a causally connected way another language and vice-versa. The fundamental aspects of inter-language reflection and the language symbiosis used therein, are discussed. Moreover the implementation of two symbiotic reflective languages is discussed: Agora/Java and SOUL/Smalltalk.

Runtime Bytecode Transformation for Smalltalk

Marcus Denker, Stéphane Ducasse and Éric Tanter 16:00 - 16:30

Transforming programs to alter their semantics is of wide interest, for purposes as diverse as off-the-shelf component adaptation, optimization, trace generation, and experimentation with new language features. The current wave of interest in advanced technologies for better separation of concerns, such as aspect-oriented programming, is a solid testimony of this fact. Strangely enough, almost all proposals are formulated in the context of Java, in which tool providers encounter severe restrictions due to the rigidity of the environment. This paper presents ByteSurgeon, a powerful library to transform binary code in Smalltalk. ByteSurgeon takes full advantage of the flexibility of the Squeak environment to enable bytecode transformation at runtime, thereby allowing dynamic, on-the-fly modification of applications. ByteSurgeon operates on bytecode in order to cope with situations where either the source code or a full compiler is not available, while providing appropriate high-level abstractions so that users do not need to program at the bytecode level. We illustrate the use of ByteSurgeon via the implementation of method wrappers and multi-methods, and report on its efficiency.

A New Model of the Time Domain

Hernán Wilkinson, Máximo Prieto and Luciano Romeo

16:30 - 17:00

Smalltalk-80 provides the classes Date and Time to model time domain entities. These abstractions cover the basic needs of most programs but they are not enough when complex observations about time have to be programmed. ANSI Smalltalk added the classes Duration and DateAndTime. Squeak augmented the model with the abstractions Timespan, Year, Month and Week. While the Squeak model provides abstractions to cover almost all the observations within the time domain, we argue that it lacks some abstractions and that it does not properly model the problem domain. In this paper we present a new set of classes that model entities of the time domain based on a simple metaphor. This model proved to us to be very powerful and easy to use. It allows programmers to design and program time related issues better than current implementations.

Towards a Taxonomy of SUnit Tests

Markus Gälli, Michele Lanza and Oscar Nierstrasz

17:00 - 17:30

Although unit testing has gained popularity in recent years, the style and granularity of individual unit tests may vary wildly. This can make it difficult for a developer to understand which methods are tested by which tests, to what degree they are tested, what to take into account while refactoring code and tests, and to assess the value of an existing test. We have manually categorized the test base of an existing object-oriented system in order to derive a first taxonomy of unit tests. We have then developed some simple tools to semi-automatically categorize tests according to this taxonomy, and applied these tools to two case studies. As it turns out, the vast majority of unit tests focus on a single method, which should make it easier to associate tests more tightly to the methods under test. In this paper we motivate and present our taxonomy, we describe the results of our case studies, and we present our approach to semi-automatic unit test categorization.

Co-evolving Code and Design with Intensional Views – A Case Study

Kim Mens, Andy Kellens, Frédéric Pluquet and Roel Wuyts

17:30 - 18:00

Intensional views and relations have been proposed as a way of actively documenting high-level structural regularities in the source code of a software system. By checking conformance of these intensional views and relations against the source code, they supposedly facilitate a variety of software maintenance and evolution tasks. In this paper, by performing a case study on three different ver-

sions of the SmallWiki application, we critically analyze in how far the model of intensional views and its current generation of tools provide support for co-evolving high-level design and source code of a software system.

Microprints: A Pixel-based Semantically Rich Visualization of Methods

Stéphane Ducasse, Michele Lanza and Romain Robbes

18:00 - 18:30

Understanding classes and methods is a key activity in object-oriented programming, since classes represent the primary abstractions from which applications are built, while methods contain the actual program logic. The main problem of this task is to quickly grasp the purpose and inner structure of a class. To achieve this goal, one must be able to overview multiple methods at once. In this paper, we present microprints, pixel-based representations of methods enriched with semantic information. We present three specialized microprints each dealing with a specific aspect we want to understand of methods: (1) state access, (2) control flow, and (3) invocation relationship.

Wednesday: Technical Track

Scrum: Mastering Your Processes

Joseph Pelrine

09:00 - 10:30

Agile software development methodologies, XP being the most known one, are becoming more and more accepted. They take the different nature of software seriously and help delivering usable software to the needs of the customer on time and on budget. At the same time agile methodologies minimize the risks and even if a project should be stopped for whatever reason the customer has not wasted his investment but owns a working system which operates to his specification up that time. But how would one control and manage projects using such methodologies? In deed classical project management has typically still the "waterfall" in mind and isn't well suited at all. SCRUM is a proven project management methodology that fits nicely with agile processes - especially XP. We will show and explain the underlying principles and report from real life projects.

Advanced Seaside (1)

Lukas Renggli

11:00 - 11:45

Seaside is a framework for developing sophisticated web applications in Smalltalk. In this talk I will present some of its advanced features, that I couldn't cover

in previous presentations. Depending on the interests of the audience I will cover some of the following topics: customization of the domain-model backtracking when the back-button of the web-browser is used, the workings of the call/answer-mechanism in Seaside and when to use composition instead of calling, writing decorations to change the look and behavior of components, the use of meta-models, such as Mewa or Magritte, to build web-applications, writing bookmarkable web-applications with Seaside, integration of Seaside with other web-applications such as PHP using Apache.

Seaside Unit

David Shaffer

11:45 - 12:30

I will present the freely available SeasideTesting framework and a small representative set of tests. SeasideTesting is a framework that extends SUnit to simplify developing and running tests of Seaside web components. This framework is unique in that it is designed specifically to allow both testing the rendered HTML result and direct access to the component instances. The advantages and some challenges that come with this capability will be discussed.

WithStyle

Rowan Bunning

14:00 - 15:00

WithStyle is an XML user interface framework that offers exciting new user interface possibilities for VisualWorks Smalltalk. WithStyle aims to bridge the 'UI divide' between web applications and desktop software. In doing so, WithStyle provides the Smalltalk community with an opportunity to innovate on the client side and combine the best attributes from both desktop software and web applications. WithStyle technology is currently used in the BottomFeeder news aggregator and blog posting tool as well as forming the basis of the XML WithStyle WYSIWYG XML editor product and an XML editor used as part of a whole-of-government content management platform in Australia. These case studies will be reviewed during this presentation.

Tools for Intensional Views

Frédéric Pluquet

15:00 - 15:30

Maintaining the source code of an evolving software system requires adequate documentation of its design and architecture. However, due to its constant evolution, it is difficult to keep source code and design / architecture synchronized. Intensional source-code views have been proposed as an active documentation technique to alleviate this problem. They increase our ability to understand, modu-

larize and browse the source code by grouping together source-code entities that address a same concern. They facilitate software development and evolution, because alternative descriptions of the same intensional view can be checked for consistency and because relations among intensional views can be defined and verified. Finally, they enable us to document and verify knowledge developers have about source code that is not captured by traditional program documentation mechanisms.

To define and verify intensional views and their interrelationships we have built a series of tools which we grouped in what we call The Intensional View Environment. All these tools were implemented in VisualWorks Smalltalk. The Intensional View Editor is a tool for defining, modifying and storing intensional views and checking them against the source code; the Relation Browser is a tool for defining, modifying and storing relations between intensional views and checking them against the source code; the Relation Inspector is a tool for getting fine-grained feedback on the validity of high-level relationships between intensional views; the Deduce Tool is a tool for automatically deducing new interesting relationships between a set of known intensional views; and finally we added support for visualizing intensional views and relations, by relying on the CodeCrawler visualization tool.

Cooking with SUnit

Joseph Pelrine

16:00 -17:30

Rarely have 3 classes and a handful of methods changed the face of software development more. SUnit, first described in an article published in the October 1994 Smalltalk Report, was an instrumental part of eXtreme Programming and its offshoot, Test-Driven Development. It has also spawned a legion of clones for other languages.

The last few years have seen a number of powerful features added to SUnit, features whose use isn't all that easy to understand. In this talk, Joseph Pelrine, current maintainer of the Camp Smalltalk Sunit project, will talk about the past and present history of SUnit, the reasons behind the new features, and will show a number of handy tips and tricks which can be used to turbocharge your testing.

OmniBase

David Gorisek

09:00 - 09:45

OmniBase, which is sometimes referred to as an object-database, is in reality 'just' a Smalltalk objects persistency system. OmniBase extends Smalltalk image with multi-user access and persistency capabilities. At the moment OmniBase is available for Dolphin Smalltalk, VisualAge Smalltalk, Cincom VisualWorks, Squeak and ST/X. With OmniBase it is possible to store any Smalltalk object in the database with all its relationships with other persistent objects. OmniBase also provides some new objects which are optimized for persistent storage. Such objects include various virtual b-tree dictionaries which can be used for indexing large amounts of data. For concurrency control OmniBase employs multi-version concurrency control where readers never block writers and writers never block readers. Although this type of concurrency control provides high concurrency potential some of its implications have to be considered when one develops an application with OmniBase. In the presentation we will show how OmniBase is being used, its object model and meta-data features. We will take a look into OmniBase internals and also show how to extend it with new types of persistent objects.

Rule-driven Workflow Enactment

Adriaan van Os and Tim Verwaart

09:45 - 10:30

At ESUG 2004 we presented the Artis system for model-driven information systems behavior in multiple contexts. In this system a combination of data models and business rules completely specifies the information need in some particular context. The data model specifies object types and their mutual relations that may be relevant in a context. However, this is not sufficient. To specify the information we also need rules for relevance, integrity and actuality.

In our presentation we will explain how the rules are related to the data model, demonstrate the user interface for editing the data model and the rules, explain the Smalltalk code for editing, parsing, and interpretation of the rules. The rules are used for generic enactment of workflow. If relevant data are not available, if data violate integrity rules, or if data no longer satisfy actuality rules, procedures (tasks) are automatically scheduled in to-do lists of responsible employees. We will explain the mechanisms (and Smalltalk code) for rule-based decisions to schedule procedures and for determination of the responsible employees.

SmallWiki 2

Lukas Renggli

11:00 - 11:45

Wikis are often implemented using string-based approaches to parse and generate their pages. While such approaches work well for simple wikis, they hamper the customization and adaptability of wikis to the variety of end-users when more sophisticated needs are required, such as different output formats, user-interfaces, wiki management and security policies.

SmallWiki 2 (smallwiki.unibe.ch) is the second version of a fully object-oriented implementation of a wiki. SmallWiki is written with objects from the top to the bottom and it can be customized easily to accommodate new needs. In addition, SmallWiki is based on a powerful meta-description called Magritte that allows one to create user-interface elements easily. In this talk I will present some of the unique features of SmallWiki, such as how pages can be composed and integrated into other web-applications. Furthermore I will create a small extension to demonstrate how to customize and add new functionality easily.

Understanding Your Code Assets with Moose

Tudor Girba

11:45 - 12:30

Software systems are complex and difficult to analyze. Reengineering is a complex analysis that usually involves combining different techniques and tools. Moose is a reengineering environment designed to provide the necessary infrastructure for building new tools and for integrating them. Moose centers on a language independent meta-model, and offers services like: metrics computation, grouping, querying, navigation, generic ui. Several tools have been built on top of Moose: CodeCrawler, a general purpose visualization tool; Hapax, a tool to analyze the semantics comprised in the comments or in the name of identifiers; Van, a tool to analyze the evolution of software systems; TraceScraper, a tool to analyze the dynamic information contained in the execution trace; Chronia, a tool to analyze directly CVS information.

Friday: Business Track

Gemstone 64

Adriaan van Os

09:00 - 09:45

The presentation will give you a corporate overview of GemStone and their Smalltalk Product Roadmap including GemStone's 64-bit strategy. GemStone/S 64-bit exploits 64-bit advantages in 2 areas: in the performance area using very

large object caches and in the scalability area using very large repository sizes and object counts. The performance gain will be demonstrated by figures derived from comparing the 32-bit and 64-bit implementations of the project at LEI - Wageningen UR.

Squeak as a Peer-to-Peer Platform

Cees De Groot

09:45 - 10:30

AardWorks VoF is working to develop Open Source software under the title 'Digital Society for the Past'. This software is a peer-to-peer platform that aims to enable a social network of people who are interested in (Dutch) history, helps them exchange information and archive contents, and bring hobbyists and professional institutions into contact with each other. The presentation will give a short demonstration of the software and a detailed overview of especially the peer to-peer architecture which could also prove useful for other projects.

Business Benefits and Risks of SOA

Andy Berry

11:00 - 11:45

You've probably heard the term 'SOA' (Service Oriented Architecture) in journals but have you considered what it means to your business and, just as important, how you avoid the risks associated with moving towards it?

We'll look at what SOA is and what tools there are to help you. Finally, we'll present some interesting ideas that we hope will set you thinking about longer term issues that could influence the way your business deals with its customers and suppliers.

Business in Cincom Smalltalk

Suzanne Fortman

11:45 - 12:30

This talk will cover the market direction Cincom is taking Cincom Smalltalk and how they propose to bring more visibility to Smalltalk and the Smalltalk community through various programs. The talk will provide an overview of customer and partner programs Cincom has initiated through marketing, education and visibility for Smalltalk applications and services into various vertical markets. Attendees will learn about new programs including the Add-ons and Applications program which is designed to promote applications written in Cincom Smalltalk and also to recruit new Cincom Smalltalk Partners.

VA Smalltalk: Going Forward

Mark Johnson

14:00 - 14:45

Instantiations has partnered with IBM to extend the viable, supported product life of VisualAge Smalltalk applications. This new relationship is an integral part of the larger IBM Smalltalk Transition and Roadmap Strategy that ensures existing VisualAge Smalltalk customer business needs and requirements are met. Under the new relationship Instantiations will develop, market and support a new, modernized, Smalltalk product called VA Smalltalk. Attendees of this session will learn about Instantiations, our history and qualifications, hear details about VA Smalltalk, as well as plans for the future.

Aggregating the Commentary

James Robertson

14:45 - 15:30

It's easy to be a product advocate if you have no practical experience using a product. It's especially easy if you spend years giving demonstrations and doing high level trouble shooting - you see all the good things about your product, and rarely see any of the real downsides.

I set out to create an RSS news aggregator in 2002 as a larger scale demonstration of what Cincom Smalltalk could do. Along the way, I learned a great many things about the product - it's strong points and it's weak points. This made me a much better customer advocate. It's one thing to hear about a bug or limitation from a customer - it's another thing entirely to be smacked in the forehead with it, and have to figure out how to deal with it.

As a result, I think Cincom's gotten a better product. By developing applications that are in real use in the field - BottomFeeder and Silt - I've been down in some of the same trenches that our customers live in. There have been useful side effects from using these tools as well - the news aggregator puts me directly in touch with all the commentary on the product suite (both positive and negative).

This practitioner's report will explain how a product manager can improve his or her product by diving in and getting his hands dirty.

Etoys 2

Michael Rüger

09:00 - 09:30

Etoys is the Squeak based visual scripting environment especially aimed at educational and school environments. Etoys 2 is the successor of the current Squeak etoys system. Etoys is based on Tweak, a new UI and event architecture built on top of Squeak. Besides using the new UI architecture of Tweak it also benefits from the new scripting and event mechanisms that are part of the Tweak core architecture and allows for seamless integration down to the system level. The talk will provide an introduction to the new system and an outlook of what's to come.

SqueakBot

Serge Stinckwich and Samir Saidani

09:30 - 10:00

The goal of the SqueakBot project is the development of a robotic platform in Squeak. More specifically, its aim is to develop a pedagogical platform that can be used by youngsters aged 8 till 18 (and beyond!) to control and simulate a diverse and varied amount of robots. At the same time, the project invites educational organizations to experiment with the developed platform. One long term goal of the project is to obtain a software architecture that can be deployed on embedded devices whose resources are limited by time, memory and processing power. The other long term goal of the project is to create a club-like collaboration structure in which many partner institutions can offer their students the possibility to participate in and work on the SqueakBot project.

Etoy Experiences Report

Rita Freudenberg

10:00 - 10:30

We have experiences in teaching Etoys to several groups of users, including 4th grade children, high school seniors, high school teachers and female university students. We used different approaches and materials in the courses. In the talk I will give an overview of our experiences and plans in order to initiate a discussion about Squeak and Etoys in education in Europe.

Bots Inc.

Stéphane Ducasse

11:00 - 11:30

My goal is to explain key elementary programming concepts (such as loops, abstraction, composition, and conditionals) to novices of all ages. I believe that learning by experimenting and solving problems with fun is central to human knowledge acquisition. Therefore, I have presented programming concepts through simple but not trivial problems such as drawing golden rectangles or simulating animal behavior. The ideal reader I have in mind is an individual who wants to have fun programming. This person may be a teenager or an adult, a schoolteacher, or somebody teaching programming to children in some other organization. Such an individual does not have to be fluent in programming in any language. As a father of two young boys I also wrote this book for all the parents that want to have fun programming with their kids in a powerful interactive environment. Programming in Smalltalk is an interactive, fun but deep experience.

ComiKit

Mikael Kindborg

11:30 - 12:00

Children have always created their own toys, often from left-over materials that happen to be available. Computer games and interactive software toys are different, however. The programming required to create your own game, even a very simple one, is just too difficult for most children to learn. The consequence is that kids are limited to the role of consumers of ready-made software.

One approach for making programming easier is to use a program representation that is similar to the runtime representation. If the source code of the program looks similar to what is seen on the runtime display, the mental gap between the two representations could be reduced. If programming could be done in a direct and concrete way, the need for mastering complex symbolic representations would be reduced. A representation that is interesting in this respect is comics. Just like a program, a comic is a static representation of something dynamic. The medium of comics gives a very direct impression of the action going on in the story. To the comic book reader, the characters in a comic almost look like they are moving and they almost sound as if they are speaking. For programs that consist of interactive graphical objects, comics have the potential to describe the behaviour of the objects in a way that strongly resembles the visual result of running the program.

ComiKit is a software tool for children that uses comic strips to program the behaviour of graphical characters. In ComiKit, a program is created by drawing pic-

tures of characters and making event strips for their actions. The event strips are monitored and executed when the game is played. Comic strip events are similar to graphical rewrite rules, but are in many ways potentially more expressive and flexible.

Friday: Technical Track

Gemstone to C#

Kirk Blackburn

14:00 - 14:45

This experience report presents a process that is currently being used to migrate a large, mission-critical VisualAge GemStone Smalltalk system to C# and .NET. Described is an effective, test-first methodology that assures the .NET version system will be source-code identical to the existing GemStone Smalltalk system. Described are the steps of this migration process. Also presented are techniques to deal with the short-comings of the C# language. Experience with moving from GemStone persistence to SQL server is also discussed.

The Squeak VM: Exploring Garbage Collection

John McIntosh

14:45 - 15:30

The Squeak garbage collector's goal 10 years ago was to use a simple generational compacting collector to perform a young space GC within 10 milliseconds on a fast 68030 macintosh. A lot has changed in 10 years, machines are much faster and expectations are to run 1GB Squeak Images serving Seaside or other multi-user systems and not exhibit bad GC behavior. This talk explores how the Squeak GC algorithm works, how it has changed and recent changes made this spring to assist data collection, and alter it's historic behavior.

Saturday: Technical Track

Liberating the Business Modeler

Mathieu van Echtelt

09:45 - 10:30

CosmoCows (CC) has developed a tool to model and host web-based administration and control-oriented applications quickly and easily. This tool consists of a framework, web browser based IDE, and a hosting environment to relieve the business modeler of technical concerns like database formats, rendering techniques, and transaction, session, and memory management. This tool is built with and is heavily influenced by Smalltalk (VisualWorks). This talk will be about the

internals of this tool and about our experiences with using the tool for control&administration purposes at fire departments, health care institutions, and construction management.

Advanced Seaside (2)

Lukas Renggli

11:00 - 12:00

Second part of the talk on “Advanced Seaside”, see the first part for a description.

A Vehicle Traffic Analysis Tool

Emerson Murphy-Hill

12:00 - 12:30

We describe a vehicle traffic analysis tool that implements an algorithm which estimates truck volume on highways. We used it to experiment with a data streaming abstraction called Infopipes, which seek to make data streaming applications easier to write. Most of the application is written in Smalltalk/X and the rest is written in Squeak. Smalltalk/X does the data processing, while Squeak provides the visualization. The two communicate by streaming data through Infopipes.

Social and Evening Events

The whole reason for programming in Smalltalk is of course to make your life easier so that you can take a break once in a while: the technical conference program of ESUG is therefore complemented with social events every evening, and a whole afternoon on Thursday.

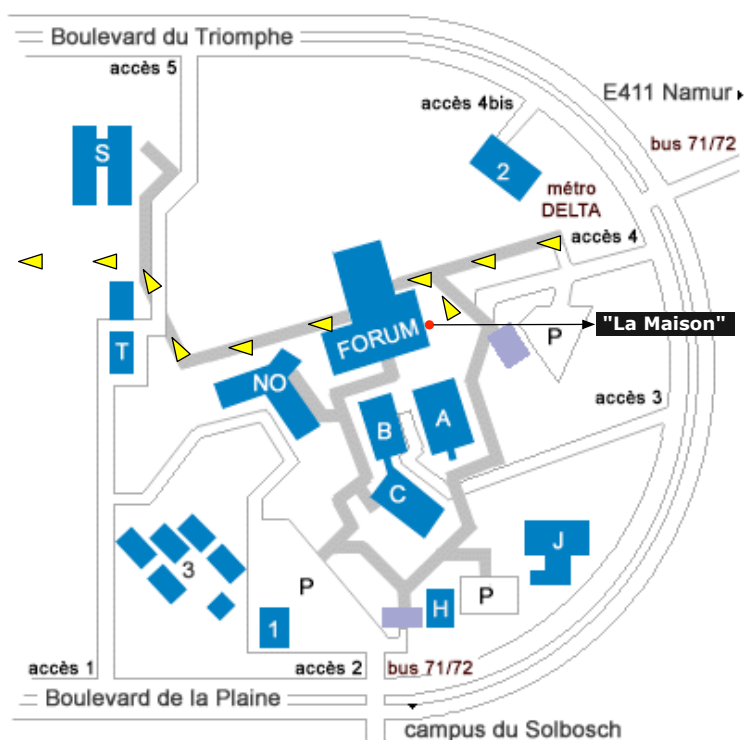
On **Tuesday** there's an on-campus welcome reception at 18:30. During the reception the contestants for the ESUG Innovation Award will also give demos of their tools, and you'll be asked to vote for the tool you found most innovative. **Wednesday evening** is a chance to taste some belgian chocolate at the "chocolate degustation" (on-campus, 17:30).

There are two social events **Thursday afternoon**: a guided tour through Brussels and a visit to the Cantillon brewery. The two events do not overlap, so you can participate in either one or both. At 13:30 a conference responsible will take you from the campus to the starting point of the tour, the tour lasts from 14:00 to 16:15 and ends at the brewery, a responsible can take you back to the campus if you choose so. If you only want to participate in the visit to the brewery, at 15:30 another responsible will take your from the campus to the brewery. The visit to the brewery lasts from 16:30 to 18:00 and afterwards you'll be taken back to the campus for the evening social event.

Thursday evening at 19:00 there's the banquet and Innovation Award ceremony. The banquet is held in a restaurant at the campus of the ULB, the yellow arrows on the campus map at the back of this guide and on the map below show how you get to the ULB campus and restaurant "La Maison".

Cantillon is a family-run brewery which prides itself on its authenticity: nothing much has changed here in over a century. Ancient red copper containers, barrels, and walls of bottles constitute the scenery for your visit. Along the way, you'll learn about the production of Lambic, Geuze, Faro and Kriek as done in old skool style. Don't miss the visit to this piece of living history, you'll be rewarded with a taste of the beer as well.

Campus ULB ▶



We can only list a small selection of restaurants here. To find other restaurants visit www.resto.be.

Note that Monday the 15th of August is a national holiday and many restaurants will be closed during the day, some exceptions near the campus are Ed Garden, La Grande Chine, Le Blé Noir, La Bastoche, Petite Planète, Tom Yam and La Becasse.

Vegetarians are a bit out of luck: restaurants in Brussels don't always cater very well to vegetarians, and the one vegetarian restaurant that's in walking distance of the campus is closed until August 17th (Shanti, Adolphe Buyllaan 68, 02.649.40.96). A list of restaurants further out can be found on www.vegetarisme.be.

VUB: Waverse Steenweg

This area is in the same direction as metro station "Petillon": simply follow the red arrows on the campus map to the "Triomflaan".

1 Ed Garden

☎ 02.647.43.31

✉ Waversesteenweg 876
1040 Etterbeek

↔ Closed Wednesday

💰 ± 30 €

ⓘ Despite the 'cafeteria'-like decor, this restaurant is well known for its mussels which are served with a variety of sauces. When the weather is nice, you can sit outside.

2 Le Mess

☎ 02.734.03.36

✉ Louis Schmidlaan 1
1040 Etterbeek

↔ On Saturday, Sunday and August 15th only open in the evening

💰 ± 30 €

ⓘ Nice restaurant, try the "moelleux au chocolat" for dessert.

3 Aquarium

✉ Waversesteenweg 1036
1160 Oudergem

↔ Open 7/7 until 00:30

💰 ± 10 €

ⓘ A fast food joint popular with the members of InfoGroep, the computer science student society. Serves kebab, pitta and falafel dishes, also offers takeaway.

4 La Grande Chine

✉ Waversesteenweg 1038
1160 Oudergem

↔ Open 7/7

💰 ± 10 €

ⓘ A run-of-the-mill Chinese restaurant, but also offers takeaway.

VUB: Ixelles Cemetery

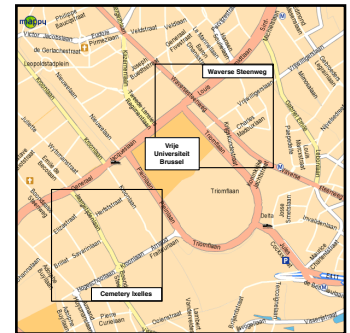
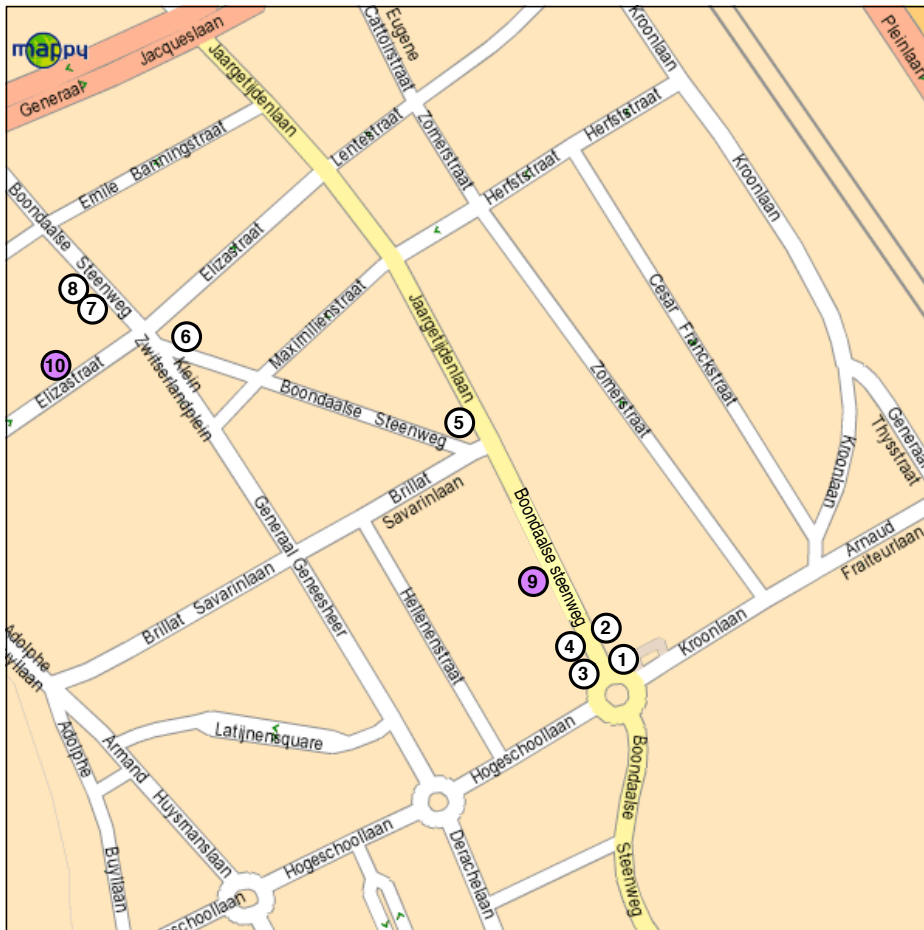
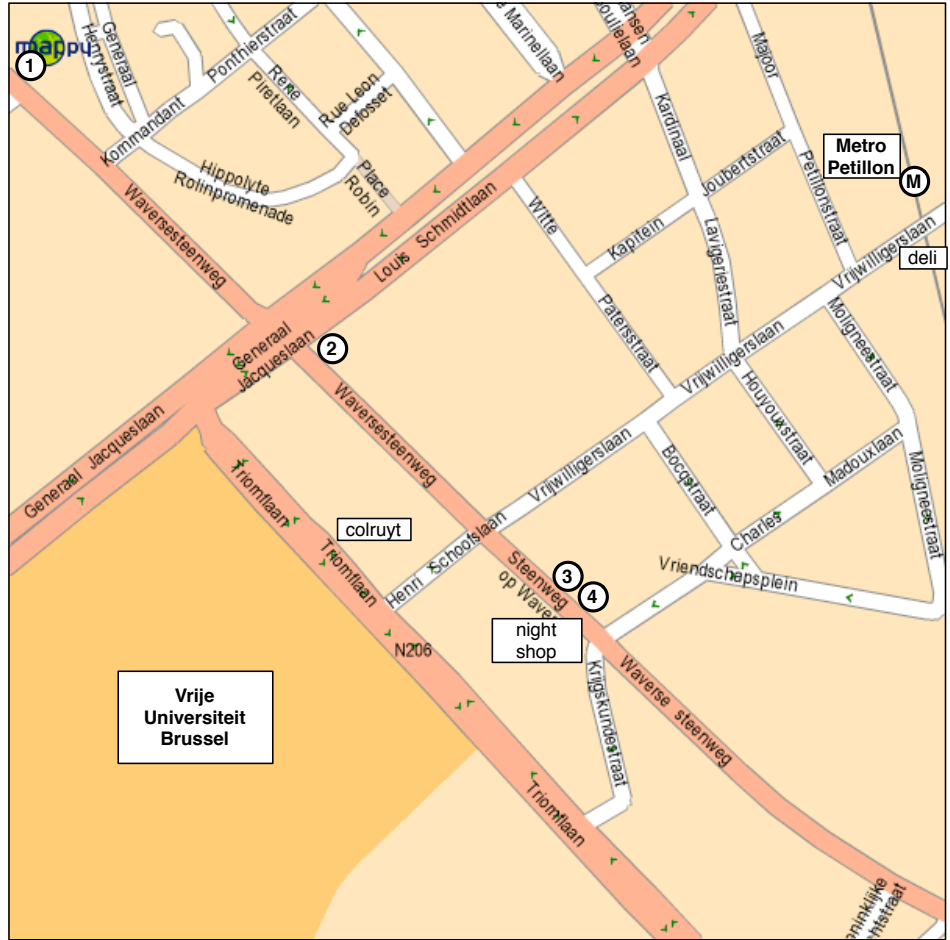
You can reach this area by walking to train station "Etterbeek" and continuing down the "Generaal Jacqueslaan" until you reach the "Jaargetijdenlaan" or the "Boondaalse Steenweg". Another route is via "Exit 13", take a left until you reach the traffic lights, take a right across the bridge and walk straight ahead to the first roundabout.

1 La Becasse

☎ 02.649.06.41

Eating & Drinking

Waverse Steenweg ▶



◀ Ixelles Cemetery

✉ Boondaalse Steenweg 476
1050 Elsene

↔ Open 7/7 from early morning till well after midnight

💰 ± 30 €

ⓘ Serves a wide range of different dishes.

2 Le Blé Noir

☎ 02.644.35.74

✉ Boondaalse Steenweg 470
1050 Elsene

↔ Closed Sunday

💰 - 25 €

ⓘ Serves breton pancakes, both sweet and sour. Very nice restaurant, though avoid going with a large party.

3 La Bastoche

☎ 02.640.34.17

✉ Boondaalse Steenweg 473
1050 Elsene

↔ Open 7/7

💰 - 25 €

ⓘ Brasserie with large plates and low prices. There can be a lot of smoke though.

4 La Petite Planète

☎ 02.640.45.11

✉ Boondaalse Steenweg 467
1050 Elsene

↔ Open 7/7

💰 - 25 €

ⓘ Super pittas.

5 The Sushi Bar

☎ 02.640.97.77

✉ Jaargetijdenlaan 123
1050 Elsene

↔ On Saturday, Sunday and August 15th only open in the evening

💰 - 25 €

ⓘ Very good sushi. But beware of typical belgian prices for sushi: a full meal with drinks can get expensive. Also offers takeaway.

6 La Pagode d'Or

☎ 02.649.06.56

✉ Boondaalse Steenweg 332
1050 Elsene

↔ Closed Monday

💰 ± 30 €

ⓘ A good price-quality vietnamese restaurant.

7 Tom Yam

☎ 02.646.50.13

✉ Boondaalse Steenweg 341
1050 Elsene

↔ Closed Sunday, on Saturday only open in the evening.

💰 ± 30 €

ⓘ A very good thai restaurant with terrace.

8 Le Grenier D'Elvire

☎ 02.648.43.48

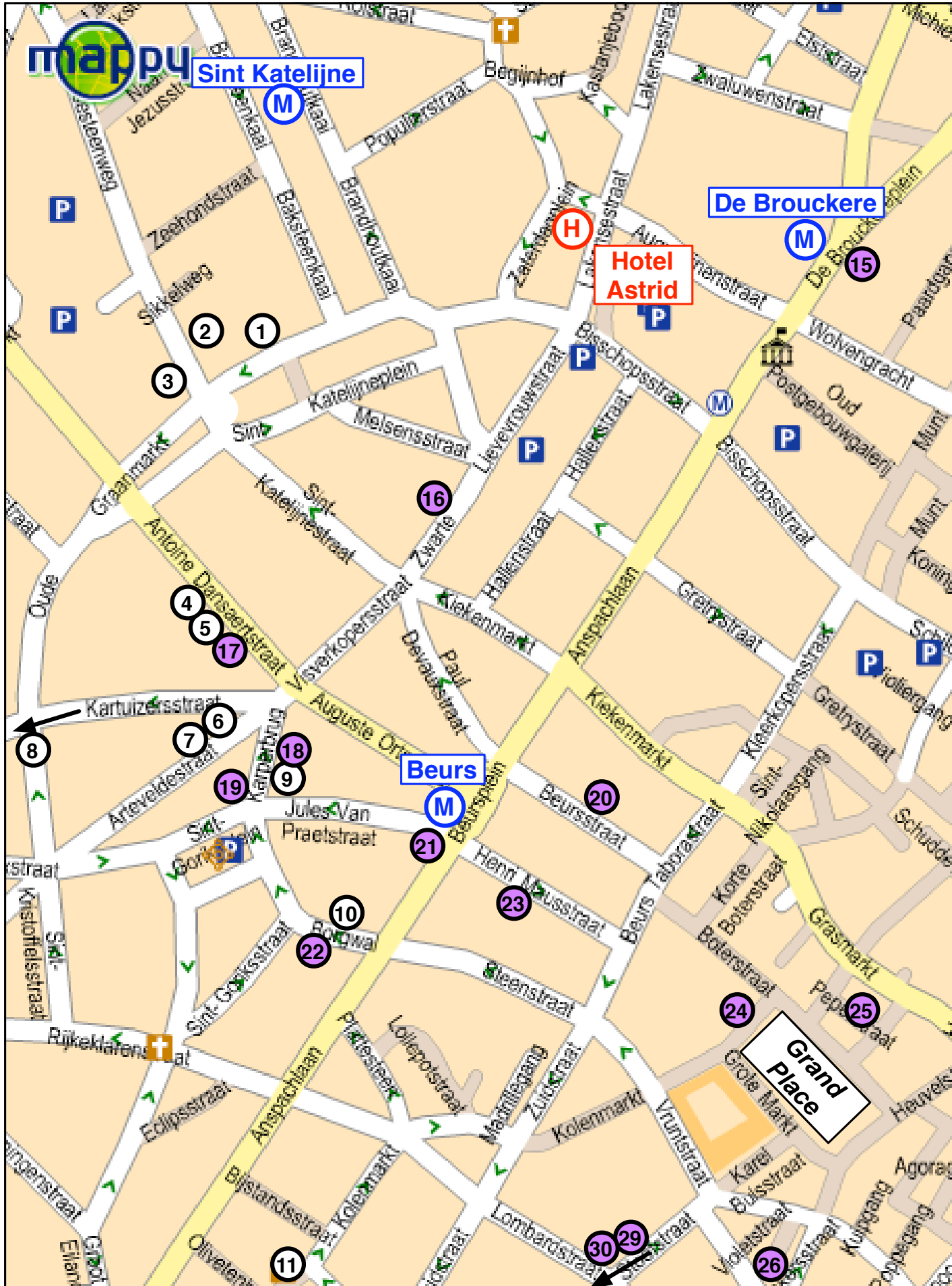
✉ Boondaalse Steenweg 339a
1050 Elsene

↔ On Saturday, Sunday and August 15th only open in the evening.

💰 - 25 €

ⓘ International fusion kitchen, known for its original salads and spare ribs. There's a cosy terrace in the back. Book in advance.

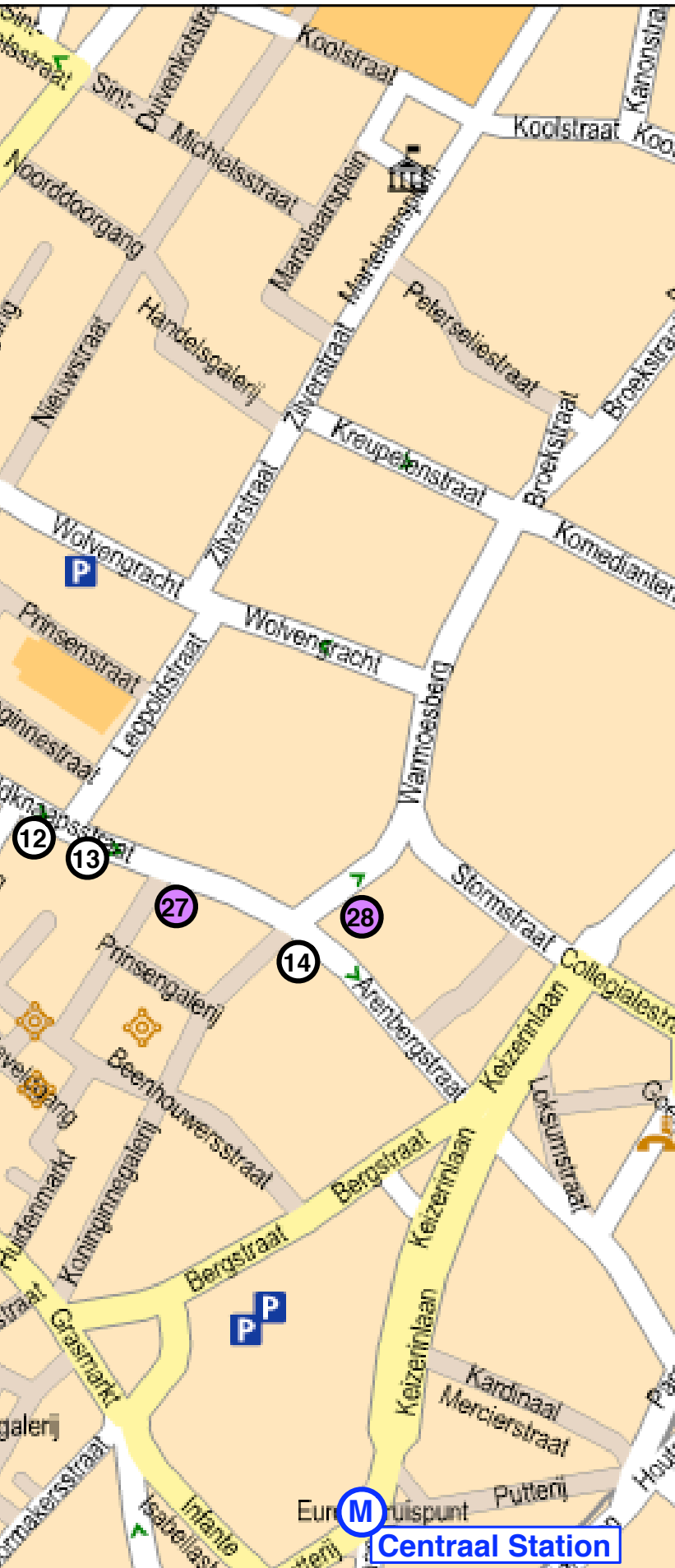
Eating & Drinking



100 m

Eating & Drinking

◀ Brussels City Centre



Belgian beers have become fashionable, yet the pleasures they offer have been truly explored by only a discerning minority of drinkers. The rule, never ask for "a beer" applies especially in Belgium. Such a request will bring forth a perfectly acceptable lager of a type, but one that could just as easily be found in many other countries. The great beers of Belgium are not its lagers. Its native brews are in other styles, and they offer an extraordinary variety, some so different from more conventional brews that at the initial encounter they are scarcely recognisable as beers. Yet they represent some of the oldest traditions of brewing in the Western world.

No other country (even those with far more breweries) has among its native styles of beer such diversity, individuality, idiosyncrasy and colour. Nor does any other country present beers so beautifully. Belgian brewers often use wired and corked Champagne bottles, and serve each beer in its own shape of glass, ranging from flutes to snifters and chalices. It is something of a Belgian speciality to bottle beers with a sediment of live yeast, so that they can be laid down to mature. This technique is usually indicated on the label by the phrase "re-fermented in the bottle" (Refermentée en bouteille / Hergist in de fles)

- Michael Jackson
www.beerhunter.com

9 Tavernier

- ✉ Boondaalsestweenweg 445
1050 Elsene
- 📍 The hippest spot in Ixelles. Get your drinks inside and enjoy the sunshine on the patio.

10 L'Atelier

- ✉ Elisastraat 77
1050 Elsene
- 📍 Even Belgians drink beer here they have never heard of before!

Brussels City Centre

11 Latini

- 📞 02.502.50.30
- ✉ Sint-Katelijne Plein 2
1000 Brussel
- 🕒 Open 7/7
- 💰 ± 30 €
- 📍 Quality kitchen with nice fresh pasta, but maybe a bit pricy.

2 Viva M'Boma

- 📞 02.512.15.93
- ✉ Vlaamsesteenweg 17
1000 Brussel
- 🕒 Closed Sunday, Monday evening, Tuesday evening, Wednesday
- 💰 - 25 €
- 📍 One of the places to go for typical Belgian and Brussels dishes.

3 Switch

- 📞 02.503.14.80
- ✉ Vlaamsesteenweg 6
1000 Brussel
- 🕒 Closed Sunday and Monday
- 💰 ± 30 €

- 📍 Put together your own dish and have it cooked. A fun concept, excellent food. Don't forget to book in advance though.

4 Bonsoir Clara

- 📞 02.502.09.90
- ✉ Antoine Dansaertstraat 22
1000 Brussel
- 🕒 Closed Saturday noon - Sunday noon
- 💰 ± 30 €
- 📍 Good food, a bit expensive.

5 La Kasbah

- 📞 02.502.40.26
- ✉ Antoine Dansaertstraat 20
1000 Brussel
- 🕒 Open 7/7
- 💰 ± 30 €
- 📍 Typical oriental restaurant both in its design and dishes.

6 Fin de Siècle

- ✉ Kartuizerstraat 9
1000 Brussel
- 🕒 Open 7/7
- 💰 -25 €
- 📍 Try the Brussels 'stoemp', a potato&vegetable dish with sausage. Also serves pasta and asian dishes.

7 Da Kao

- 📞 02.512.67.16
- ✉ Van Arteveldestraat 19
1000 Brussel
- 🕒 Open 7/7
- 💰 -25 €
- 📍 A cheap Vietnamese restaurant. Usually crowded, but because of the fast service you won't have to wait long.

8 In 't Spinnepopke

☎ 02.511.86.95

✉ Bloemenhof plaats 1
1000 Brussel

🚪 Closed Sunday

💰 ± 30 €

📍 Belgian cuisine with belgian beers.
Quality of service may vary.

9 Sakura

☎ 02.502.43.65

✉ Karperbrug 11
1000 Brussel

🚪 Open 7/7

💰 - 25 €

📍 Nice sushi and other japanese food.

10 Le Bar à Tapas

☎ 02.502.66.02

✉ Borgwal 11
1000 Brussel

🚪 Closed Sunday, on Saturday only
open in the evening.

💰 - 25 €

📍 The name says it all: tapas!

11 Katja's Kitchen

☎ 0497.47.33.37

✉ Kolenmarktstraat 87
1000 Brussel

🚪 Closed Monday and Tuesday

💰 ± 30 €

📍 Veggie-friendly restaurant which
makes you feel at home.

12 Ricotta & Parmesan

☎ 02.502.80.82

✉ Schildknaapstraat 31
1000 Brussel

🚪 Closed Sunday

💰 ± 30 €

📍 A nice italian restaurant with excel-
lent food in a warm decor.

13 Hemispheres

☎ 02.513.93.70

✉ Schildknaapstraat 65
1000 Brussel

🚪 Closed Sunday, on Saturday only
open in the evening.

💰 - 25 €

📍 Serves moroccan, lebanese and
asian dishes.

Belgian pommes frites (french fries or chips) are known around the world. They must be good as the average Belgian consumes 96 kilos of fries each year. The secret to their success is double-frying: once, immediately after slicing, to cook the inside, and then again just before serving, to make the outside golden brown. Try them the local way, served in a paper cone with a large dollop of mayonnaise on top.

Belgian endive (chicons/witloof) is a vegetable specialty served raw in salads, creamed in soup, braised in butter and garlic, or baked with ham in a cheese sauce (chicons au gratin/gegratineerd witloof met ham).

For cheese-lovers, living in Belgium is paradise. Local cheeses range from the mild and semi-soft Abbey cheeses (Echte Loo, Maredsous and Chimay) to the ultra-strong Herve Doux and Herve Piquant and Maroilles, known affectionately as the "little stinker." Needless to say, hundreds of varieties of heavenly French cheeses are also readily available.

14 Arcadi

☎ 02.511.33.43

✉ Arenbergstraat 1b
1000 Brussel

↔ Open 7/7

💰 ± 15 €

📍 Like a Paris Bistro, cheap, cheerful and tasty. Known for its vegetable pies, and the best ham and cheese spaghetti in town.

15 Hotel Métropole

✉ De Brouckereplein 31
1000 Brussel

📍 Grand belle-epoque café for those that want to see and be seen.

16 Kafka

✉ Zwarte Lievevrouwenstraat 6-8
1000 Brussel

📍 Feels like a small local pub, people reading books or making conversation over a glass of beer. Speciality of the house : vodka.

17 L'Archiduc

✉ Antoine Dansaertstraat 6
1000 Brussel

📍 Classy joint with lovely art-deco decor and jazz music in the background. Should the door be closed, ring the doorbell and the door will be opened for you.

18 Café Bizon

✉ Karperbrugstraat 7
1000 Brussel

📍 Cabin-style pub with american influences. Choices of whisky bourbon and blues music coming out of the speakers.

19 Mappa Mondo

✉ Karperbrugstraat 2
1000 Brussel

📍 Original café on the busy St-Goriksplein with some less common beers on tap.

20 Cirio

✉ Beursstraat 18
1000 Brussel

📍 This Belle-Epoque next to the Beurs is quite often visited by the locals. Don't forget to use the bathroom!

21 O'Reilly's

✉ Beursplein 1
1000 Brussel

📍 The best Irish pub in town.

22 Café Central

✉ Borgwal 14
1000 Brussel

📍 The latest hot spot in town.

23 Falstaff

✉ H. Mausstraat 17-21
1000 Brussel

📍 One of Brussels most elegant pubs with an extraordinary art-nouveau decor.

24 Le Roy D'Espagne

✉ Grote Markt 1
1000 Brussel

📍 Pricy brasserie on the Grand Place. A lot of tourists, but worth the visit for the decor alone.

25 Le Cercueil

✉ Haringstraat 10
1000 Brussel

- ① A 'macabre' pub which makes you wonder whether you are in a tomb or a pub.

26 Goupil Le Fol

✉ Violetstraat 22
1000 Brussel

- ① A dark and mysterious pub with lots of French 'Chanson' and cocktails (both alcoholic and non-alcoholic). Pricey but worth the visit.

27 Lop Lop Café

✉ Schildknaapstraat 29
1000 Brussel

- ① An international pub but with more than a 100 beers to try.

28 Mort Subite

✉ Warmoesberg 7
1000 Brussel

- ① In The Sudden Death is a strange name for a delightful 19th century café, but Mort Subite is a famous Brussels beer you have to try. The interior has more or less remained unchanged since the 19th century and, so it seems, have the staff.

29 Poechenellekelder

✉ Eikstraat 5
1000 Brussel

- ① A typical pub with Brussels products and a check in the local dialect.

30 Goudblommeke v. Papier

✉ Cellebroersstraat 55
1000 Brussel

- ① Travel back in time in this small pub with special artifacts and a 180 year old stove from Leuven (quite typical).

Traditional speculoos cookies are another typical Belgian taste treat. These crisp, spicy biscuits are also used for making speculoos icecream, a speciality to be found in Brussels.

Some different varieties of beer you can enjoy:

Blanche or white beers: wheat beer that's light and trendy, cloudy and smooth, a little on the sweet side. This thirst-quenching beer combines character and flavor with a low alcohol content. Try the famous Hoegaarden beer.

Lambic: a non-malted wheat beer, a beer naturally fermented by 'wild', airborne yeasts, you'll get more explanation at the Cantillon brewery visit on thursday.

Gueuze: a blend of two or more Lambic beers to create a secondary fermentation and a Champagne-like sparkle.

Faro: a Lambic for the faint of heart. A sweetened variety with some of the flavor but little of the intensity of other Lambics.

Kriek: a Lambic beer in which a further fermentation has been brought about with the addition of cherries or raspberries, refreshing in summer!

Brown Beers: mainly brewed in Flanders, these beers are hearty and full-flavored.

Red Beers: produced in West Flanders from red barley. These beers are aged in oak. They are fruity, sweet and sour, and are very thirst-quenching.

This section only list some of the more noteworthy sights and museums in Brussels, for a more comprehensive list we refer you to the guide book to Brussels included in your conference pack. Opening hours, websites and the locations of the museums mentioned here can also be found in the guide book. You may also want to check out the website of the Brussels Tourist Office: www.brusselsinternational.be

Belgisch Centrum van het Beeldverhaal & BD Walk

If you are only familiar with Belgium's most famous comic strip "Tintin", you should definitely visit the Comic Strip Centre. The centre is both a library holding over 30.000 works of "the 9th art", and a museum covering 60 years of history in the development of the Belgian comic strip. You can even spend an entire afternoon reading comics in the reading room.



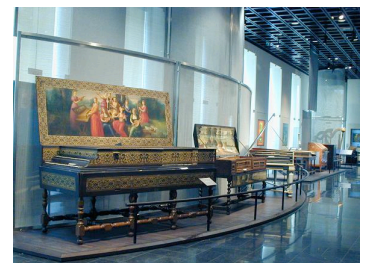
But you don't even have to go to the museum to find comic strips in Brussels: about 30 walls in the city centre have been decorated with comic strip figures. A route for a walk that brings you past the "BD walls" and a number of other sights is given in the guide book.

Royal Museum of Fine Arts

Another art Belgium is famous for is surrealist painting, the Royal Museum of Fine Arts has the largest collection of works by Magritte and has devoted an entire room to this one artist. Other painters whose works you can admire here include Hiëronymus Bosch, Rubens, Jordaens and Van Dyck. There are also sculptures to admire by artists such as Rousseau, Rodin, Geefs and Gréco.

Musical Instruments Museum

The saxophone, invented by Belgian Adolphe Sax, is just one of the over 1500 instruments on display in the Musical Instruments Museum. Its four floors cover the development of the modern orchestra, string and keyboard instruments, traditional instruments and mechanical instruments. Visitors are provided with infrared-controlled headphones so one can also hear musical extracts for a number of instruments while passing them by, ranging from ancient Greek to 20th-century Varèse music. Housed in a splendid Art Nouveau building by Victor Horta, the museum is even worth a visit for its architecture alone.



Museum of Natural Sciences

The natural sciences museum's pride is its unique collection of "Iguanodon bernissartensis" skeletons. In 1878, the skeletons of this previously unknown species of dinosaur were uncovered in a coal mine at Bernissart, hence the name. No less than thirty almost complete skeletons were found. Unfortunately the wing in which a number of them were housed for the last century is undergoing renovations, so currently only three Iguanodon are on display. Other objects of interest include the Ishango bone, which bears carvings that indicate humans started developing mathematical understanding at least 20.000 years ago. The museum also houses permanent exhibits of whale skeletons, shells, insects and mammals. But check the website at www.naturalsciences.be before visiting to see which halls are closed due to the renovation works.



Chocolate Museum & Gourmet Trail

If you want to know more about the history of chocolate, head for the chocolate museum. Or if you just want to taste the famous Belgian chocolates: the Brussels Tourist Office website suggests a walk titled "Gourmet Trail" which brings you past the museum and the finest "chocolatiers" in Brussels. There's a chance to taste beers and waffles along the way as well. Be adventurous and don't limit yourself to tasting the "pralines" with sweet fillings only, try those with teas and spices as well at Pierre Marcolini's.

If you have an iPod: www.podguides.net offers free guided tours in the form of podcasts, there's one to Brussels night life and one to monuments in Ghent.

Royal Army and Military History Museum

The collection of the Royal Military Museum consists of imposing suits of armour and masterly crafted swords, hundreds of uniforms from tens of countries as well as textile such as flags and pennants, exceptional medals and rare musical instruments, weapons and equipment of every kind. From battering ram to F-16, the Royal Military Museum offers an insight into the fundamental changes which have taken place in armament and military technology over the years.

Like the Eiffel tower in Paris, the Atomium was supposed to be demolished after the world fair for which it was built, but was kept and eventually became a defining landmark of the city. Its 9 spheres represent the atoms of an iron crystal magnified 165 billion times. It's unfortunately closed for some much-needed renovation, but its shiny new plating can easily be seen from higher vantage points in the city.

Useful Phonenumber and Websites

Conference Contact

If you have a problem and need to contact someone 0478-62 49 01
from the conference: (Please use with care, for general
inquiries please ask someone at the information desk)

Emergencies

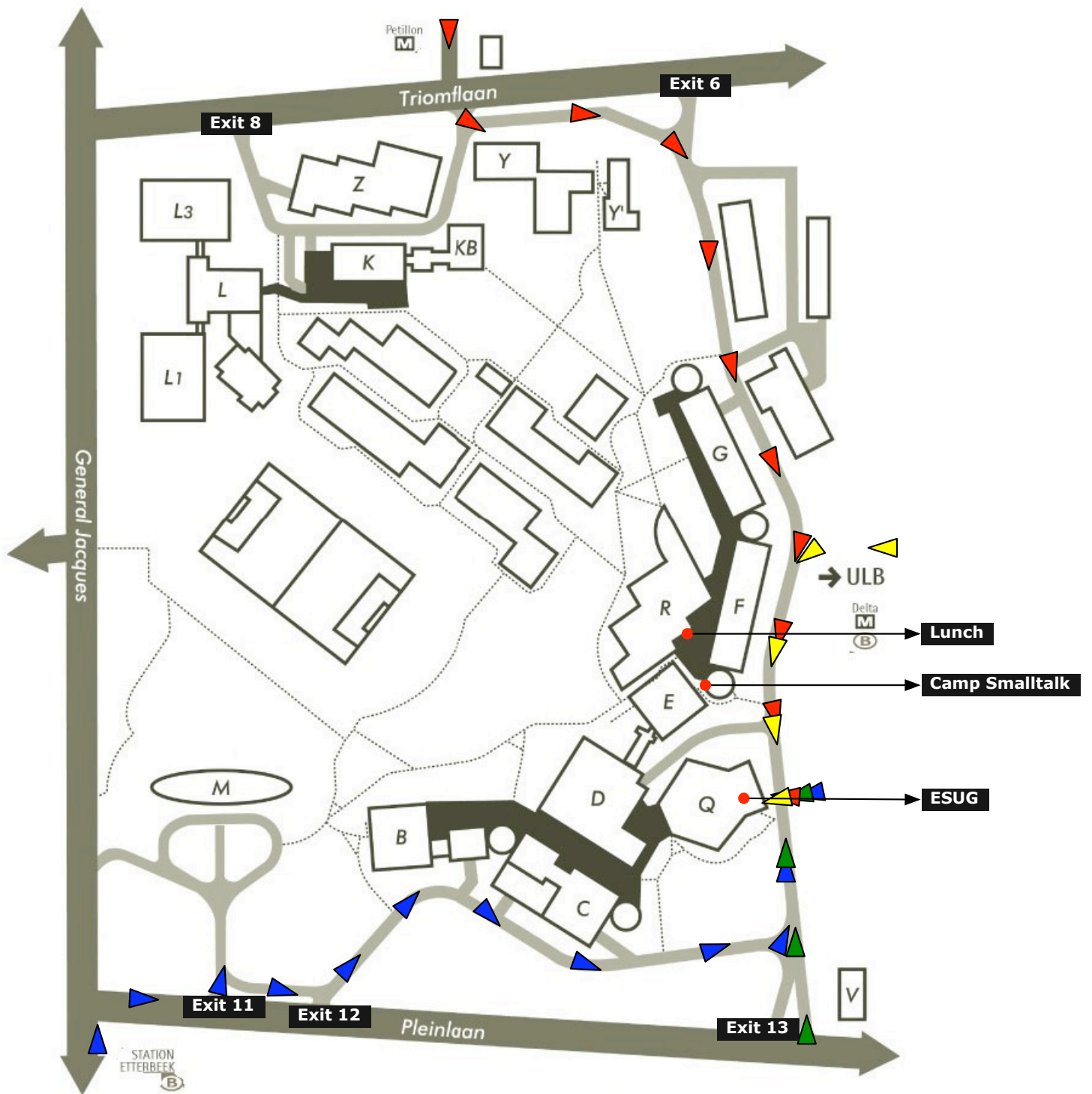
Emergency number in Europe (Police, Accidents) (also for mobile phones)	112
Emergency number in Belgium (Fire, Ambulance) (NOT for mobile phones)	100
Police	101
Centre for Fire Wounds Brussels	02-26.862.00
Anti-poison Centre	070-245.245

Health

Finding a Pharmacy	0900-10.500
Finding a Doctor or Pharmacy	02-479.18.18
Finding a Dentist	02-426.10.26
<i>All of the above also online at: (French and Dutch only)</i>	www.apotheek.be

Taxi Companies (also check p. 6)

Taxis Verts & Taxi Orange Transport within Brussels is always 22€ with these two com- panies.	02-349.49.49 www.taxiorange.be
Taxis Autolux Focuses on airport transport. You can find them at the airport taxi stand. Ask the driver for a form that will give you a spe- cial reduction of 20% on your return trip.	02-411.41.42 www.taxisautolux.be
Taxis Bleus	02-268.00.00 www.taxisbleus.be
Coopérative Nouvelle des Taxis Ucclois-2000	02-537.10.10 02-374.20.20 www.taxisucclois2000.be
<i>Lost property or complaints about driver</i>	0800-14795



Reaching the conference at "Aula Q" from ...

- ▶ Metro station Petillon
- ▶ ULB, metro station Delta, Banquet at "La Maison"
- ▶ Exit 13
- ▶ Train station Etterbeek