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SPENCER:

Social situation-aware perception and action for cognitive robots

Project start: April 1, 2013

Duration: 3 years

DELIVERABLE 7.1

Public SPENCER web site and communication platform

Due date: month 4 (Jul 2013)

Lead contractor organization: ALU-FR

Dissemination Level: PUBLIC

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Abstract

This deliverable presents the SPENCER Web site and communication platform www.spencer.eu. It has been set up by the Consortium as a dissemination tool and internal platform for information exchange. In two sections we describe the general setup and the current structure of the site. We also report on the SPENCER cooperate design with logo and web page header.

The deliverable is structured as follows: Sec. 1 details the general setup, including acquisition of the domain name, hosting of the site, use of a lean content management system and the web page design. Sec. 2 presents the structure of the Web site such that all pages can be reached directly from the main menu and briefly describes the current content of the pages.

1 Setup and Design

1.1 Domain Name

By 2013, the domain www.spencer.eu was held by domain trader BliXem BV, Nijmegen, The Netherlands. For the sake of a simple and easy-to-remember web address, – and thus for a wider dissemination – we decided to purchase the domain for the amount of 1650 € in October 2012 (see document in Appendix A). The domain was transferred to the coordinator Kai Arras in November 2012 and is now registered at VIP Internet, Nijmegen, The Netherlands.

1.2 Hosting

After thorough comparisons of several international hosting companies, we decided to host the SPENCER web page at www.strato.de. Strato had the best offers in terms of cost-efficiency and professional requirements (particularly 50GB of Web space and unlimited traffic). We purchased the Strato package PowerWeb Plus (order nr.: 4198399) which over the three year project duration will cost less than 300 € (see document in Appendix B). The consortium intends to maintain the web page beyond the lifetime of the project for continued dissemination of the project results, this is possible by extending the contract for 120 € per year.

The SPENCER Web site is on-line since the project start on April 1st, 2013.

Login to the Hosting Site

- URL: www.strato.de
- Client nr.: [available on request for authorized individuals]
- Password: [available on request for authorized individuals]
- Domain: www.spencer.eu

Strato FTP Account

- Host: [ftp.strato.com](ftp://ftp.strato.com)

- User: [on request for authorized individuals]
- Password: [on request for authorized individuals]
- Protocol: FTP
- Directory: /

1.3 Content Management

There are typically two options for web site content management, a professional content management system (CMS) and a self-managed solution. The question has been discussed within the consortium for which we evaluated the popular systems Joomla www.joomla.org and Drupal www.drupal.org and a self-managed solution using JavaScript/CSS/HTML. It was found that for the purpose of the SPENCER Web site, a lean content management solution using JavaScript/CSS/HTML was preferred in particular given the foreknowledge of the main contributors to the Web site, partners ORU and ALU-FR, in the use of these technologies. The CMS option was dismissed for reasons of large overhead and shallow learning curve. While a full content management system would better scale for very large Web sites or when there are many users responsible for the content of the Web site, the chosen solution is very easy to setup and use (anybody who knows HTML needs in the order of 10 minutes to understand how to modify a web page, see Fig. 1). At the same time this “thin CMS” allows to separate maintenance of central features and individual Web content and it leaves full flexibility to modify the general appearance of the page (knowing JavaScript and CSS).

The basic idea is that the central areas of the pages can be used freely by modifying a simple HTML file (see example below). All other design elements such as header, footer, menu, etc. are defined in a JavaScript and a CSS definition file, which is typically modified only by one or two persons.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <meta http-equiv="content-type" content="text/html; charset=utf-8" />
    <meta name="author" content="Rohini J. Lillienthal, Kai Aroras" />
    <meta name="keywords" content="SPENCER" />
    <meta name="description" content="" />
    <meta name="robots" content="all" />
    <title>SPENCER Project</title>
    <style type="text/css" media="all">@import "styles.css";</style>
    <script src="spencer.js" type="text/javascript"></script>
  </head>
  <body onload="init('.', 'Resources');"><div id="Content">
    <div id="Message">
      <em class="msg">Please switch on JavaScript in your browser!</em><br /><br /> If you see this message, JavaScript is not active.
    </div>
    <h1>Resources</h1>
    <table style="border: 1px solid #FFFFFF; width: 100%; border-collapse: collapse; border: none;">
      <tr>
        <td>
          <h2>Data Sets</h2>
          <p class="text">Annotated and documented data sets collected in SPENCER.</p>
          <p class="text" style="color: #AAAAAA; font-style: italic;">TBDC</p>
          <h2>Software</h2>
          <p class="text">Open-source software systems and tools developed in SPENCER.</p>
          <p class="text" style="color: #AAAAAA; font-style: italic;">TBDC</p>
          <h2>Press Material</h2>
          <p class="text">SPENCER dissemination and press material.</p>
          <p class="text" style="color: #AAAAAA; font-style: italic;">TBDC</p>
        </td>
      </tr>
    </table>
  </div>
</body>
</html>
```

Figure 1: HTML code of an example SPENCER web page. The lines marked in yellow define the freely editable content area of the page. Other page design elements such as header, footer, and menu are automatically added. The yellow area corresponds to the red frame in Fig. 2.

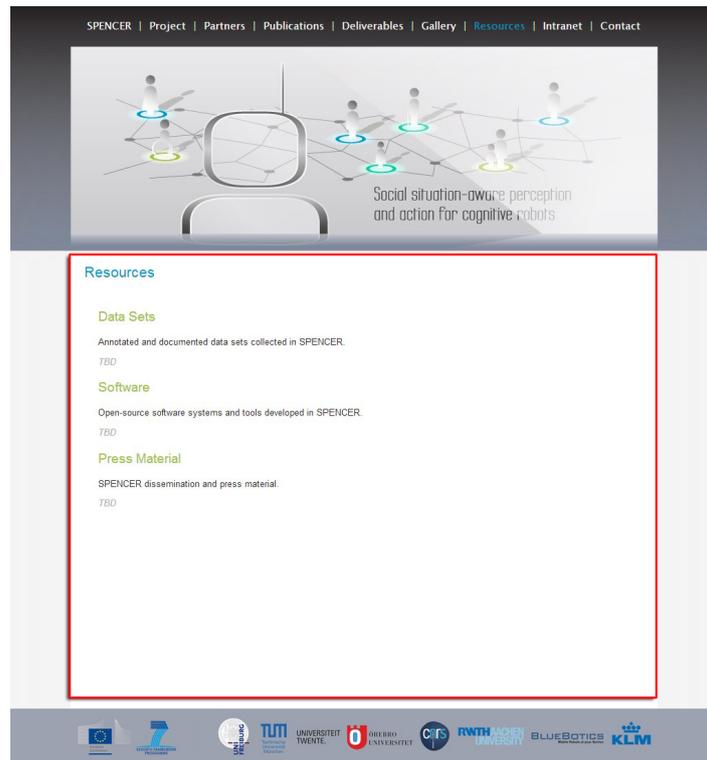


Figure 2: Example SPENCER web page. The content area that can be edited by authors is shown as a red frame. It corresponds to the highlighted code section in Fig. 1.

1.4 Mailing Lists

A large project like SPENCER requires modern tools for efficient communication. In particular, to avoid electronic spam to unconcerned people, it is important to interact in dedicated and well directed fashion for which mailing lists are a common instrument. To this end, we have set up the following SPENCER mailing lists:

- **all@spencer.eu:** Reaches all SPENCER personnel.
- **alladmin@spencer.eu:** Reaches the legal and administrative representatives of all partners e.g. at the respective EU offices. This is practical when the communication concerns legal and administrative matters.
- **sb@spencer.eu:** Reaches the SPENCER Steering Board members.
- **ab@spencer.eu:** Reaches the SPENCER Advisory Board members.
- **info@spencer.eu:** General project contact address for external requests. Reaches the SPENCER Executive team: coordinator, scientific manager, and administrative project leader.
- **coordinator@spencer.eu:** Reaches the SPENCER coordinator Kai Arras
- **scmanager@spencer.eu:** Reaches the SPENCER scientific manager Rudolph Triebel.
- **administration@spencer.eu:** Reaches the SPENCER administrative project leader Dagmar Sonntag.

1.5 Web Page Design

The SPENCER web page is held in accordance with the SPENCER cooperate design. For the cooperate design, the company formfabrik, Zwilikon, Switzerland was appointed for an amount of 485 € (600 CHF). The task included the design of a SPENCER logo and a SPENCER web page header. The logo was chosen among several draft concepts and feedback iterations with the coordinator Kai Arras. The final concept, which was selected after a discussion within the consortium, show an abstracted robot that appears to look at groups of abstracted persons of different age, gender and mobility. It was chosen because it symbolizes very well one of the key contributions of the SPENCER project, namely the consideration of people as individual persons at all levels of perception, cognition, learning and planning. The logo is shown in Fig. 3 and the web page header is shown in Fig. 2. The logo thereby defines the color scheme which was then adopted for the remaining design elements of the Web site such as fonts, links, headers, etc. in order to give the site a homogeneous and professional appearance.

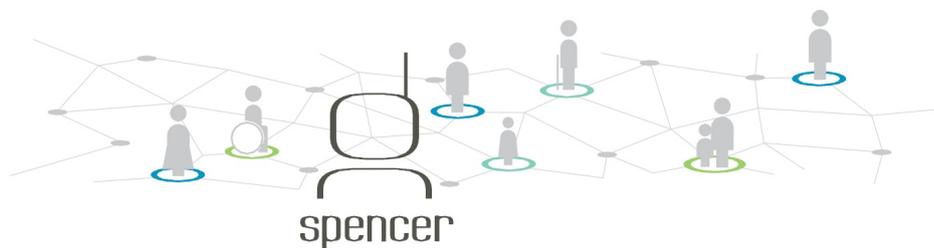


Figure 3: The SPENCER Logo.

2 Structure and Content

The current structure of the SPENCER Web site (at July 30th, 2013) is shown in Fig. 4. The navigation concept is very flat and avoids deeply nested submenus, each page can be directly reached from the main menu. In order to access the internal pages, an authentication is necessary as described in Sec. 2.8.

Pages are divided into three sections, header with navigation menu, content area and footer. Header, menu and footer are permanent. The header shows a variation of the SPENCER logo, the footer contains all partner logos and the logos of the EU (EC and FP7).

We will now describe each page in more detail. All screenshots have been retrieved on July 30th, 2013.

2.1 SPENCER Web Site - Section “SPENCER”

Section “SPENCER” is the entry page into the SPENCER Web site. It shows an extended header (extended with a specific “spencer” font), a welcome message, a short description of the project and the project’s profile in the form of an itemized list. The EU support is clearly mentioned.

In addition, a dynamic slideshow and a news section are shown on the right. The starting image of the slideshow is shuffled randomly which lets the user see a different image each time the site is newly loaded. These components are maintained centrally (i.e. they are part of the JavaScript system). Clicking on pictures of the slideshow shows the image in its original size.

2.2 SPENCER Web Site - Section “Project”

Section “Project” gives a detailed overview of the SPENCER project. It summarizes the project’s motivation, the key ideas and contributions, its objectives, demonstration scenario and work packages.

2.3 SPENCER Web Site - Section “Partners”

Section “Partners” lists all legal partner institutions of the SPENCER consortium. In addition, the section also gives the executing labs of the respective beneficiary, the competences of each partner related to SPENCER, and the project personnel by names and roles.

2.4 SPENCER Web Site - Section “Publications”

Section “Publications” lists the publications of all partners that are related to and supported by the SPENCER project. If copyright regulations allow it, we link the respective PDF files for download from this page (by clicking on the PDF symbol).

2.5 SPENCER Web Site - Section “Deliverables”

Section “Deliverables” lists all SPENCER deliverables along with their number, description, responsible partner, dissemination level and project month. For all public deliverables, the respective PDF files will be linked. Restricted deliverables will be linked in the Intranet section of the webpage which requires authorization.

2.6 SPENCER Web Site - Section “Gallery”

Section “Gallery” contains a gallery of project-related photos and videos. Picture and videos will be shown by thumbnails (larger version on click). Videos will additionally be published on the SPENCER YouTube channel.

2.7 SPENCER Web Site - Section “Resources”

Section “Resources” will be the central point for the publication of SPENCER data sets, software and press material.

2.8 SPENCER Web Site - Section “Intranet”

Section “Intranet” is the internal communication platform. The section contains various pieces of information that are relevant for the entire consortium and is the place to define project-wide standards, list all personnel with contact information, or share important documents. It is not directly accessible from the Internet and requires authentication. The credentials for authentication are available for all project collaborators and on request for authorized individuals.

The internal pages currently cover the following topics:

- **Contacts:** Lists the contact details of all collaborators on SPENCER.
- **Meeting material:** Contains slides of all meeting presentations and meeting minutes. At this point, only the material related to the the kick-off meeting is available.
- **Project acknowledgment:** Defines the text snippets that everyone has to use to properly acknowledge the EU funding of the project in general and in publications.
- **Publications:** Explains the steps to register a paper and gives the HTML snippet necessary to add it to the list of publications in the “Publication” section
- **Important documents:** Contains the PDFs of all important project documents (DoW, Grant Agreements, Proposal, Gantt diagram, etc.);
- **Confidential deliverables:** Lists the restricted deliverables that are not in the regular “Deliverables” section
- **Links:** Links of common interest to the consortium, such as related EU project.

2.9 SPENCER Web Site - Section “Contact”

Section “Contact” gives the contact details of the project coordinator, scientific and administrative project manager. It also describes how to reach the University of Freiburg and provides maps that show Freiburg, the Faculty of Engineering campus as well as the public traffic system and close-by hotels.

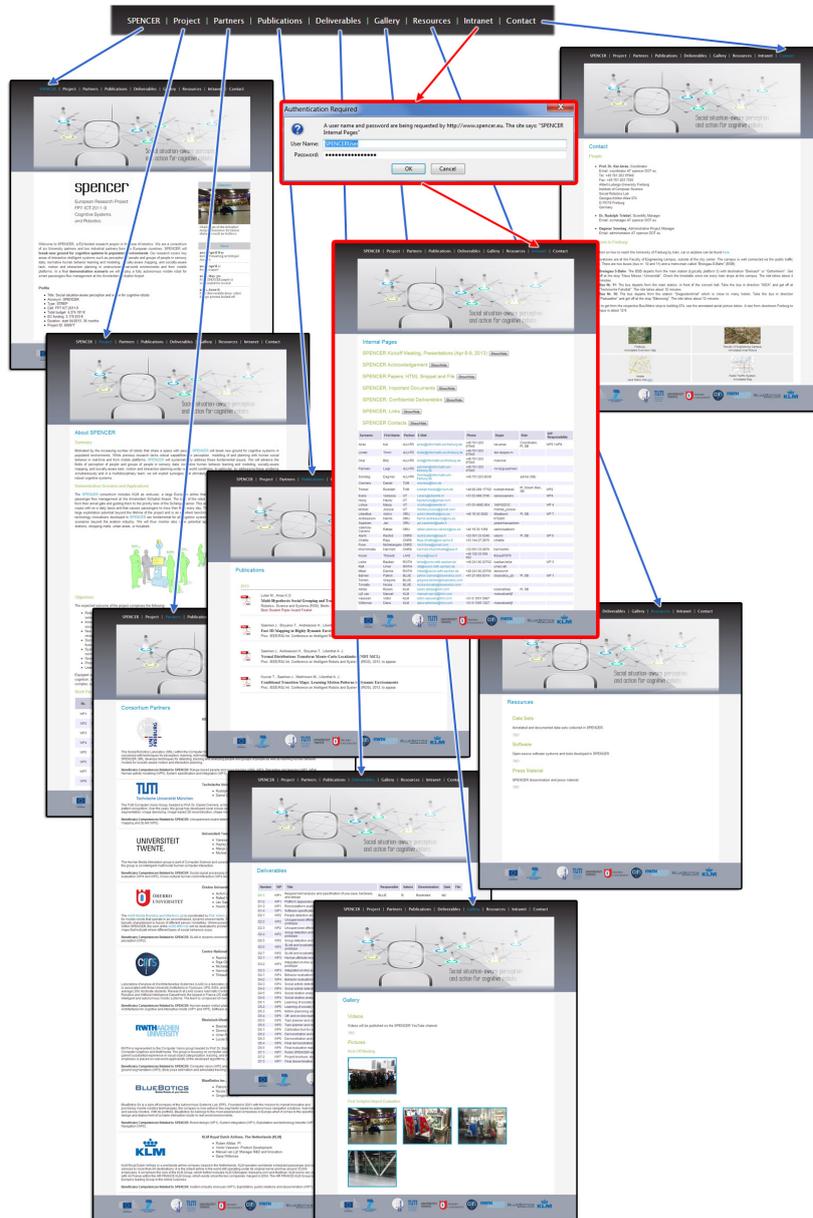


Figure 4: SPENCER Web site structure. All pages can be directly reached from the main menu.

SPENCER | [Project](#) | [Partners](#) | [Publications](#) | [Deliverables](#) | [Gallery](#) | [Resources](#) | [Intranet](#) | [Contact](#)



Social situation-aware perception and action for cognitive robots

spencer

European Research Project
FP7-ICT-2011-9
Cognitive Systems
and Robotics

Welcome to SPENCER, a EU-funded research project in the area of robotics. We are a consortium of six University partners and two industrial partners from five European countries. SPENCER will **break new ground for cognitive systems in populated environments**. Our research covers key areas of interactive intelligent systems such as perception of people and groups of people in sensory data, normative human behavior learning and modeling, socially-aware mapping, and socially-aware task, motion and interaction planning in unstructured real-world environments and from mobile platforms. In a final **demonstration scenario** we will deploy a fully autonomous mobile robot for smart passengers flow management at the Amsterdam Schiphol Airport.

Profile

- Title: Social situation-aware perception and action for cognitive robots
- Acronym: SPENCER
- Type: STREP
- Call: FP7 ICT 2011-9
- Total budget: 4,274,181 €
- EC funding: 3,179,933 €
- Duration: start 04/2013, 36 months
- Project ID: 600877

Slideshow



Challenges of the Schiphol Airport Scenario: Dynamic obstacles such as trolleys.

News

2013, April 8-9:
Kick-off meeting at Schiphol Airport

2013, April 1:
Project start!

2013, May 30:
First SPENCER paper is nominated for award

2013, June 6:
First deliverable done, robot design process kicked off



Figure 5: SPENCER entry page.

[SPENCER](#) | [Project](#) | [Partners](#) | [Publications](#) | [Deliverables](#) | [Gallery](#) | [Resources](#) | [Intranet](#) | [Contact](#)



Social situation-aware perception and action for cognitive robots

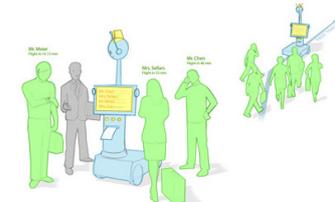
About SPENCER

Summary

Motivated by the increasing number of robots that share a space with people, SPENCER will break new ground for cognitive systems in populated environments. While previous research lacks robust capabilities for perception, modeling of and planning with human social behavior in real-time and from mobile platforms, SPENCER will systematically address these fundamental issues. We will advance the fields of perception of people and groups of people in sensory data, normative human behavior learning and modeling, socially-aware mapping, and socially-aware task, motion and interaction planning under real-world conditions. In particular, by addressing these problems simultaneously and in a multidisciplinary team, we will exploit synergies that ultimately lead to human-friendly, safer, more efficient, and robust cognitive systems.

Demonstration Scenario and Applications

The SPENCER consortium includes KLM as end-user, a large European airline that will deploy a robotic demonstrator for transfer passenger flow management at the Amsterdam Schiphol Airport. The task of the robot includes picking up delayed transfer passengers from their arrival gate and guiding them to the priority lane of the Schenger barrier. This actually helps in an operational challenge that KLM copes with on a daily basis and that causes passengers to miss their flight every day. The demonstration deployment in SPENCER has a large exploitation potential beyond the lifetime of the project and is an excellent benchmark of the developed research. In addition, as the technology innovations developed in SPENCER are fundamental for all cognitive systems in human environments, they apply to general scenarios beyond the aviation industry. We will thus monitor also other potential application domains such as public spaces, train stations, shopping malls, urban areas, or hospitals.



Objectives

The expected outcome of the project comprises the following:

- Robust detection, tracking and multi-person analysis of individuals and groups of people from mobile platforms across multiple sensors, distances and attribute confidences;
- Innovative recognition methods for social relations and social hierarchy within groups of people that are robust to occlusions likely to occur with sensors on mobile platforms;
- New foundations for learning, modeling, and benchmarking social norms for cognitive systems including novel methods for the recognition of social activities and situations;
- Socially normative robot behavior learning and adaptation for human-aware navigation and interaction including their appropriate fusion and concatenation to complex task-level behavior blocks;
- Systematic and continuous evaluation of the achieved results through user studies that assess socio-psychological effects of normative robot behaviors including cross-cultural aspects;
- Novel methods for real-time integrated motion planning under socially normative constraints;
- Probabilistic map learning of object-specific time-scales for robust robot navigation in dynamic environments;
- Learning socially annotated maps that provide a socio-spatial understanding of environments.

Equipped with these cognitive capabilities - which systematically account for the rich and social nature of humans across perception, cognition, and action - robots will be able to navigate and interact more efficiently, robustly, safely, and socially more acceptable in complex, open-ended real-world settings.

Work Packages

Nr.	Description	Responsible
WP1	Requirement Analysis, Platform Specification and Design	BLUE
WP2	Far-Range Perception: People and Object Analysis	TUM
WP3	Close-Range Perception: Human Attribute Analysis	RWTH
WP4	Group-Level Analysis and User Studies	UT
WP5	Behavior Learning and Planning	ALU-FR
WP6	System Integration, Deployment, and Evaluation	CNRS
WP7	Dissemination and Exploitation	ORU
WP8	Management	ALU-FR



Figure 6: SPENCER “Project” page.

[SPENCER](#) | [Project](#) | [Partners](#) | [Publications](#) | [Deliverables](#) | [Gallery](#) | [Resources](#) | [Intranet](#) | [Contact](#)



Social situation-aware perception and action for cognitive robots

Consortium Partners



Albert-Ludwigs-Universität Freiburg, Germany (Coordinator, ALU-FR)

- Kai Arras: Coordinator, PI
- Dagmar Sonntag: Administrative Project Manager
- Timm Linder: PhD student
- Luigi Palmieri: PhD student
- Billy Okal: PhD student

The Social Robotics Laboratory (SRL) within the Computer Science Department of the University of Freiburg is headed by Kai Arras. The lab is concerned with techniques for perception, learning, estimation, and planning in the context of socially enabled cognitive systems. Within SPENCER, SRL develops techniques for detecting, tracking and analyzing people and groups of people as well as learning human behavior models for socially-aware motion and interaction planning.

Beneficiary Competences Related to SPENCER: Range-based people and group tracking (WP4, WP3), Perception and learning (WP2, WP4), Human activity modeling (WP5), System specification and integration (WP1), Management (WP6)



Technische Universität München, Germany (TUM)

- Rudolph Triebel: Scientific Manager, PI
- Daniel Cremers: PI

The TUM Computer Vision Group, headed by Prof. Dr. Daniel Cremers, is focused on a range of topics in computer vision, image analysis and pattern recognition. Over the years, the group has developed novel convex optimization methods to solve a number of problems including image segmentation, image denoising, image-based 3D reconstruction, shape matching and optical flow estimation.

Beneficiary Competences Related to SPENCER: Unsupervised object detection (WP2), Online estimation of dynamic objects (WP2), 3D mapping and SLAM (WP2).



Universiteit Twente, The Netherlands (UT)

- Vanesse Evers: PI
- Hayley Hung: PI
- Melina Lohse: Postdoc
- Michel Joosse: PhD student

The Human Media Interaction group is part of Computer Science and consists of about 10 senior researchers and 20 PhD students. The focus of the group is on intelligent multimodal human-computer interaction.

Beneficiary Competences Related to SPENCER: Social signal processing (WP2), Human-robot interaction (WP4 and WP6), User experience evaluation (WP4 and WP6), Cross-cultural human robot interaction (WP4 and WP6).



Orebro University, Sweden (ORU)

- Achim J. Lilienthal: PI
- Rafael Valencia: Postdoc
- Jari Saanen: Postdoc
- Henrik Andreasson: Postdoc

The AASS Mobile Robotics and Orientation Lab is coordinated by Prof. Achim J. Lilienthal. The focus of this lab is generally on perception systems for mobile robots that operate in an unconstrained, dynamic environments. The approaches developed address real-world needs and are typically characterized by fusion of different sensor modalities. Where possible, research results are timely integrated in industrial demonstrators. Within SPENCER, the work at the AASS MRO Lab will be dedicated to problems related to localization in dynamic environments and the creation of maps that indicate where different types of social behaviors occur.

Beneficiary Competences Related to SPENCER: SLAM in dynamic environments (WP2), Semantic mapping (WP2), Navigation (WP5), 3D perception (WP2).



Centre National de la Recherche Scientifique CNRS, France (CNRS)

- Rachid Alami: PI
- Raja Chatila: PI
- Nicholas Ffowke: PhD student
- Harmish Khambhatta: PhD student
- Thibault Kruse: Postdoc

Laboratoire d'Analyse et d'Architectures Systèmes (LAAS) is a laboratory of CNRS, the French National Organisation for Scientific Research. It is associated with three University institutions in Toulouse: UPS, INSA, and INP. LAAS has a permanent staff of over 320, together with (on average) 250 doctoral students. Research at LAAS covers Automatic Control, Computer Science and Engineering, and Microelectronics. The Robotics and Artificial Intelligence Department, the largest in France (25 staff, 50 PhD students, and 7 post-docs), is active in research on intelligent and autonomous robotic systems. The team is composed of members from the Robotics and Interactions group.

Beneficiary Competences Related to SPENCER: Human-aware motion planning (WP5), Decisional issues in Human-robot interaction (WP5), Architectures for cognitive and interactive robots (WP1 and WP5), Software system specification and integration (WP6).



Rheinisch-Westfälische Technische Hochschule Aachen, Germany (RWTH)

- Bastian Leibe: PI
- Dennis Mitzel: Postdoc
- Umer Rafi: PhD student
- Lucas Beyer: PhD student

RWTH is represented by the Computer Vision group headed by Prof. Dr. Bastian Leibe, which is part of the chair of Computer Science 8, Computer Graphics and Multimedia. The group is focusing on computer vision applications for mobile devices and robotics platforms and has gained substantial experience in visual object categorization, tracking, and in the interface between recognition and 3D reconstruction. Particular emphasis is placed on real-world applicability of the developed algorithms, which is an important prerequisite for robotics applications.

Beneficiary Competences Related to SPENCER: Computer vision (WP2 and WP3), Object recognition (WP2), Visual tracking (WP2), Figure-ground segmentation (WP3), Body pose estimation and articulated tracking (WP3).



BlueBotics Inc., Switzerland (BLUE)

- Patrick Balmer: PI
- Nicola Tomatis
- Gregoire Tennen

BlueBotics SA is a spin-off company of the Autonomous Systems Lab, EPFL. Founded in 2001 with the mission to market innovative and promising mobile robotics technologies, the company is now active in two segments based on autonomous navigation solutions: automation and service robotics. With its portfolio, BlueBotics SA belongs to the most experienced companies in Europe when it comes to the specification, design and deployment of complex interactive robots in real-world environments.

Beneficiary Competences Related to SPENCER: Robot design (WP1), System integration (WP1), Exploitation and technology transfer (WP7), Navigation (WP5).



KLM Royal Dutch Airlines, The Netherlands (KLM)

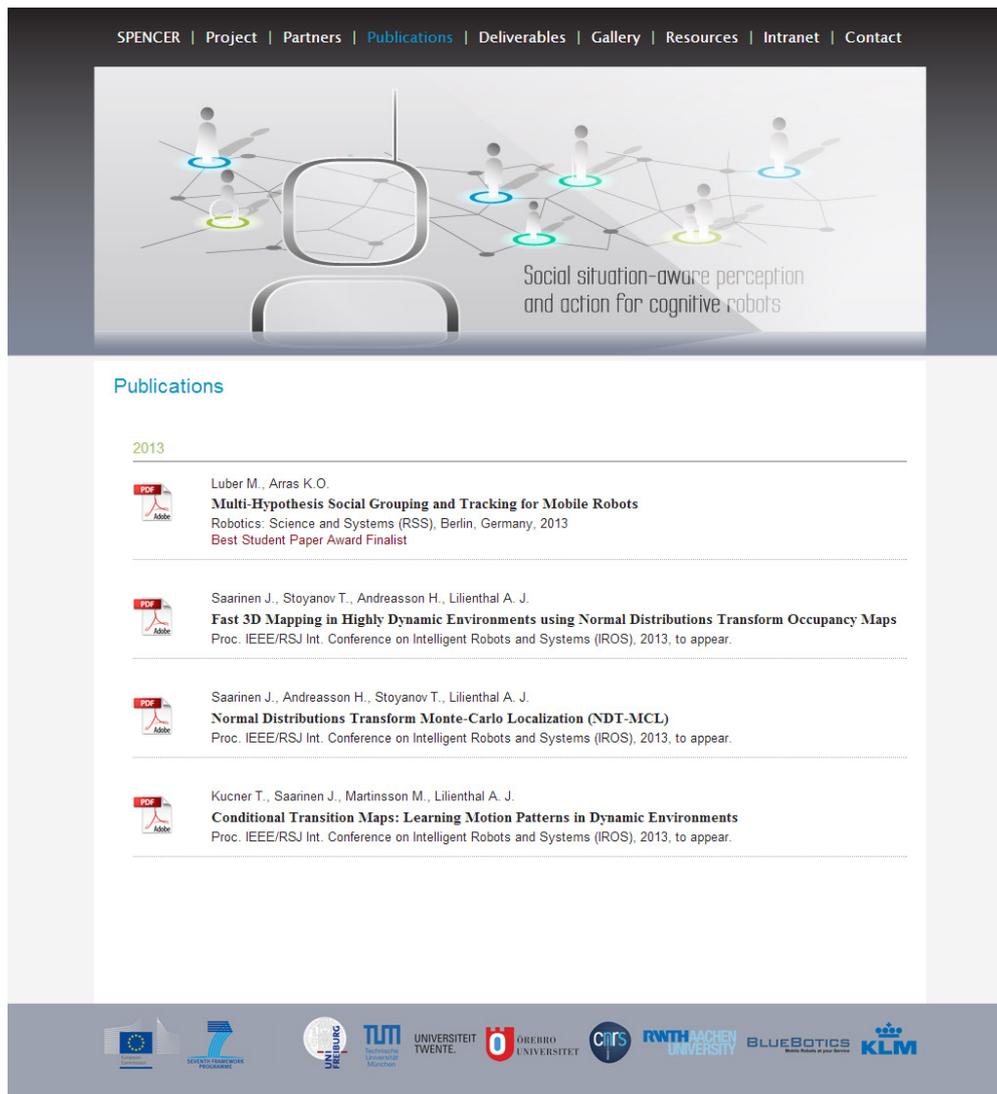
- Ruben Alblas: PI
- Victor Vaessen: Product Development
- Manuel van Lijf: Manager R&D and Innovation
- Dana Willemse

KLM Royal Dutch Airlines is a worldwide airline company based in the Netherlands. KLM operates worldwide scheduled passenger and cargo services to more than 90 destinations. It is the oldest airline in the world still operating under its original name and has around 33,000 employees. It comprises the core of the KLM Group, which further includes KLM Cityhopper, transavia.com and Martinair. KLM works very closely with all France within the AIR FRANCE-KLM Group, which exists since the two companies merged in 2004. The AIR FRANCE-KLM Group is Europe's leading Group in the Airline business.

Beneficiary Competences Related to SPENCER: Aviation industry end-user (WP1), Exploitation, public relations and dissemination (WP7).



Figure 7: SPENCER “Partners” page.



SPENCER | Project | Partners | Publications | Deliverables | Gallery | Resources | Intranet | Contact

Social situation-aware perception and action for cognitive robots

Publications

2013

 Luber M., Arras K.O.
Multi-Hypothesis Social Grouping and Tracking for Mobile Robots
 Robotics: Science and Systems (RSS), Berlin, Germany, 2013
 Best Student Paper Award Finalist

 Saarinen J., Stoyanov T., Andreasson H., Lilienthal A. J.
Fast 3D Mapping in Highly Dynamic Environments using Normal Distributions Transform Occupancy Maps
 Proc. IEEE/RSJ Int. Conference on Intelligent Robots and Systems (IROS), 2013, to appear.

 Saarinen J., Andreasson H., Stoyanov T., Lilienthal A. J.
Normal Distributions Transform Monte-Carlo Localization (NDT-MCL)
 Proc. IEEE/RSJ Int. Conference on Intelligent Robots and Systems (IROS), 2013, to appear.

 Kucner T., Saarinen J., Martinsson M., Lilienthal A. J.
Conditional Transition Maps: Learning Motion Patterns in Dynamic Environments
 Proc. IEEE/RSJ Int. Conference on Intelligent Robots and Systems (IROS), 2013, to appear.












Figure 8: SPENCER “Publications” page.

SPENCER | Project | Partners | Publications | **Deliverables** | Gallery | Resources | Intranet | Contact



Social situation-aware perception and action for cognitive robots

Deliverables

Number	WP	Title	Responsible	Nature	Dissemination	Date	File
D1.1	WP1	Requirement analysis and specification of use-case, hardware, and design	BLUE	R	Restricted	M2	
D1.2	WP1	Platform appearance design	BLUE	R	Restricted	M6	
D1.3	WP1	Robot platform available	BLUE	P	Restricted	M12	
D1.4	WP1	Software specification of the robot architecture	CNRS	R	Public	M12	pdf
D2.1	WP2	People detection and tracking from depth and vision data	RWTH	P	Public	M12	pdf
D2.2	WP2	Unsupervised offline classification of dynamic objects early prototype	TUM	P	Restricted	M12	
D2.3	WP2	Unsupervised offline classification of dynamic objects	TUM	P	Public	M34	pdf
D2.4	WP2	Group detection and tracking from depth and vision data early prototype	ALU-FR	P	Restricted	M21	
D2.5	WP2	Group detection and tracking from depth and vision data	ALU-FR	P	Public	M34	pdf
D2.6	WP2	SLAM and localization with socially annotated mapping early prototype	ORU	P	Restricted	M21	
D2.7	WP2	SLAM and localization with socially annotated mapping	ORU	P	Public	M34	pdf
D3.1	WP3	Human attribute recognition	ALU-FR	P	Public	M12	pdf
D3.2	WP3	Integrated on-line system for detailed multi-person analysis early prototype	RWTH	P	Restricted	M21	
D3.3	WP3	Integrated on-line system for detailed multi-person analysis	RWTH	P	Public	M34	pdf
D4.1	WP4	Behavior evaluation through user studies early report	UT	R	Public	M12	pdf
D4.2	WP4	Behavior evaluation through user studies report	UT	R	Public	M34	pdf
D4.3	WP4	Social activity detection early prototype	ALU-FR	P	Restricted	M12	
D4.4	WP4	Social activity detection	ALU-FR	P	Public	M34	pdf
D4.5	WP4	Social relation analysis early prototype	UT	P	Restricted	M21	
D4.6	WP4	Social relation analysis	UT	P	Public	M34	pdf
D5.1	WP5	Learning of socially normative behaviors early prototype	ALU-FR	P	Restricted	M12	
D5.2	WP5	Learning of socially normative behaviors	ALU-FR	P	Public	M34	pdf
D5.3	WP5	Motion planning under socially normative constraints	CNRS	P	Public	M18	pdf
D5.4	WP5	Off- and on-line learning for socially normative task planning	CNRS	P	Public	M34	pdf
D5.5	WP5	Task planner and robot supervision system early prototype	CNRS	P	Restricted	M21	
D5.6	WP5	Task planner and robot supervision system	CNRS	P	Public	M34	pdf
D6.1	WP6	Calibration tool for sensory setup	TUM	P	Public	M7	pdf
D6.2	WP6	Demonstration and experiments after integration week II	CNRS	D	Public	M18	pdf
D6.3	WP6	Demonstration and experiments after integration week IV	CNRS	D	Public	M28	pdf
D6.4	WP6	Final demonstration at Amsterdam Schiphol Airport	ALU-FR	D	Public	M35	pdf
D6.5	WP6	Final evaluation report	UT	R	Public	M36	pdf
D7.1	WP7	Public SPENCER web site and communication platform	ALU-FR	O	Public	M4	
D7.2	WP7	Project brochure, dissemination material and first exploitation plan	BLUE	R	Public	M12	pdf
D7.3	WP7	Final dissemination material and exploitation plan	BLUE	R	Public	M36	pdf












Figure 9: SPENCER “Deliverables” page.

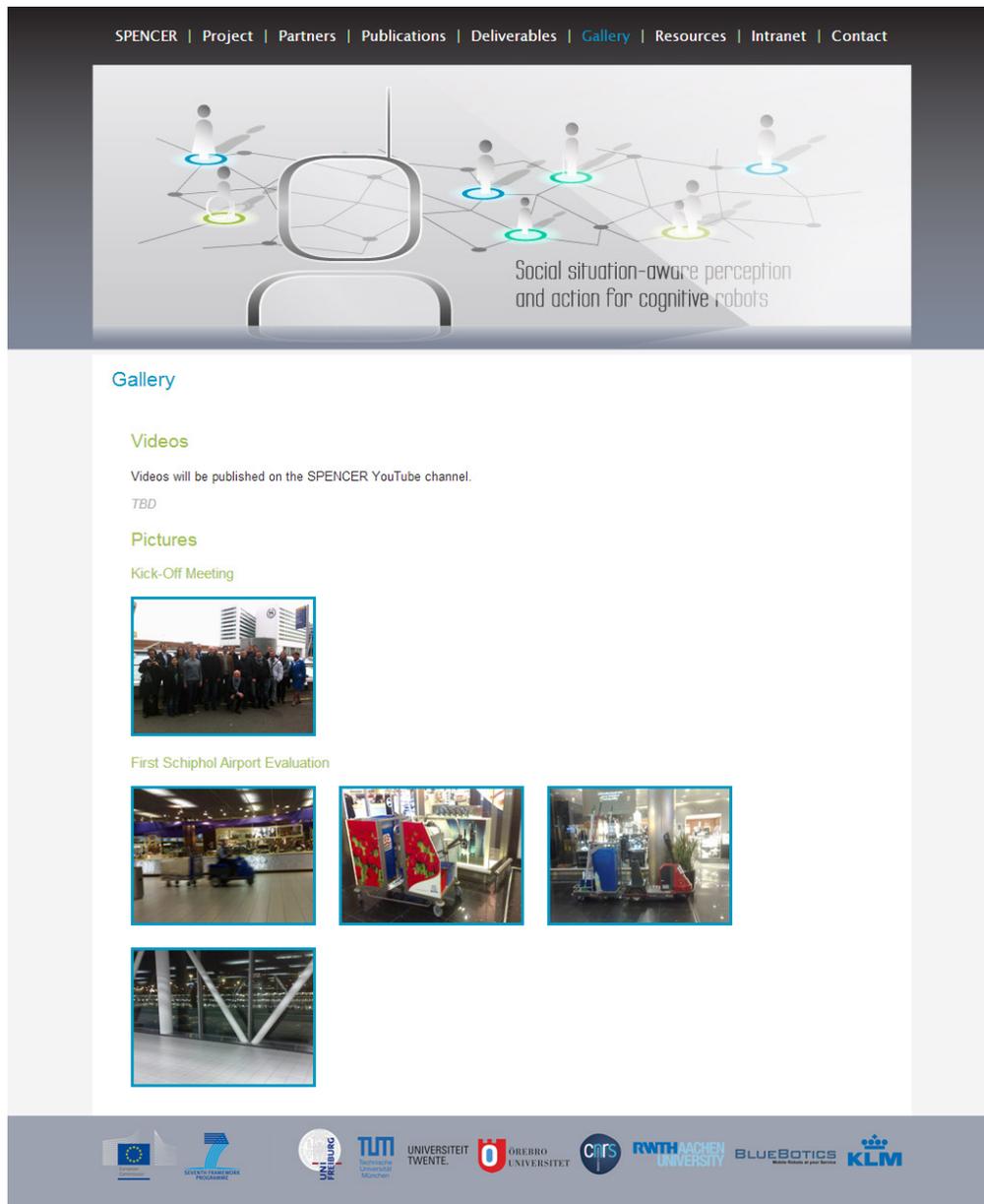


Figure 10: SPENCER “Gallery” page.

The image shows a screenshot of the SPENCER website's 'Resources' section. At the top, a navigation bar contains links for 'SPENCER | Project | Partners | Publications | Deliverables | Gallery | Resources | Intranet | Contact'. Below this is a header image featuring a network diagram with stylized human figures and a central robot head, with the text 'Social situation-aware perception and action for cognitive robots'. The main content area is titled 'Resources' and contains three sub-sections: 'Data Sets' (Annotated and documented data sets collected in SPENCER. TBD), 'Software' (Open-source software systems and tools developed in SPENCER. TBD), and 'Press Material' (SPENCER dissemination and press material. TBD). The footer contains logos for the European Union, Horizon 2020, and various partner institutions: UNI FREIBURG, TUM, UNIVERSITEIT TWENTE, ÖREBRO UNIVERSITET, CITS, RWTH AACHEN UNIVERSITY, BLUEBOTICS, and KLM.

SPENCER | Project | Partners | Publications | Deliverables | Gallery | Resources | Intranet | Contact

Social situation-aware perception and action for cognitive robots

Resources

Data Sets

Annotated and documented data sets collected in SPENCER.
TBD

Software

Open-source software systems and tools developed in SPENCER.
TBD

Press Material

SPENCER dissemination and press material.
TBD

Logos: European Union, Horizon 2020, UNI FREIBURG, TUM, UNIVERSITEIT TWENTE, ÖREBRO UNIVERSITET, CITS, RWTH AACHEN UNIVERSITY, BLUEBOTICS, KLM

Figure 11: SPENCER Web Site - Section “Resources”.

SPENCER | Project | Partners | Publications | Deliverables | Gallery | Resources | Intranet | Contact



Social situation-aware perception and action for cognitive robots

Internal Pages

- SPENCER Kickoff Meeting, Presentations (Apr 8-9, 2013) [Show/Hide](#)
- SPENCER Acknowledgement [Show/Hide](#)
- SPENCER Papers: HTML Snippet and File [Show/Hide](#)
- SPENCER, Important Documents [Show/Hide](#)
- SPENCER, Confidential Deliverables [Show/Hide](#)
- SPENCER, Links [Show/Hide](#)
- SPENCER Contacts [Show/Hide](#)

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Willemse	Dana	KLM	dana.willemse@klm.com	+31 6 1365 1307	manuelvanlijf		



Figure 12: SPENCER Web Site - Section “Intranet”.

[SPENCER](#) | [Project](#) | [Partners](#) | [Publications](#) | [Deliverables](#) | [Gallery](#) | [Resources](#) | [Intranet](#) | [Contact](#)



Social situation-aware perception
and action for cognitive robots

Contact

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- **Dagmar Sonntag**, Administrative Project Manager
 Email: administration AT spencer DOT eu

Directions to Freiburg

Information on how to reach the University of Freiburg by train, car or airplane can be found [here](#).

Our laboratories are at the Faculty of Engineering campus, outside of the city center. The campus is well connected via the public traffic system. There are two buses (bus nr. 10 and 11) and a metro-train called "Breisgau-S-Bahn" (BSB).

- **Breisgau-S-Bahn**: The BSB departs from the main station (typically platform 5) with destination "Breisach" or "Gottenheim". Get off at the stop "Neue Messe / Universität". Check the timetable since not every train stops at the campus. The ride takes about 4 minutes.
- **Bus Nr. 11**: The bus departs from the main station, in front of the concert hall. Take the bus in direction "IKEA" and get off at "Technische Fakultät". The ride takes about 12 minutes.
- **Bus Nr. 10**: The bus departs from the station "Siegessäule" which is close to many hotels. Take the bus in direction "Paduaallee" and get off at the stop "Bärenweg". The ride takes about 12 minutes.

In order to get from the respective Bus/Metro stop to building 074, see the annotated aerial picture below. A taxi from downtown Freiburg to the campus is about 12 €.

Maps

 Freiburg, Annotated Overview Map	 Faculty of Engineering Campus, Annotated Aerial Picture
 Hotels (and follow this link)	 Public Traffic System, Annotated Map



Figure 13: SPENCER Web Site - Section "Contact".

3 Appendix A: Agreement of Transfer of Domain Name



AGREEMENT OF TRANSFER

The Undersigned,

BliXem BV, settled (6525 EC) Nijmegen at Oranjesingel 76, acting as a representative for the holder of the domain name, represented by its general manager Rudy L.M. Broekman, from here on to be referred to as "seller" and

Name
Kai Arras
University of Freiburg
Georges-Koehler-Allee 074
D-79110 FREIBURG
GERMANY

From here on to be referred to as "buyer"

Regarding domainname : **spencer.eu**

From here on to be referred to as "domain name"

Hereby declare having agreed to:

Seller sells to buyer, who buys from seller, all rights which can be drawn from registration of the aforementioned domain name with the electronic domain name register of EURid, which, at present, belongs to seller.

Seller declares to, until signing date of this agreement, have paid all fees regarding the registration in the electronic domain name register of aforementioned domain name to EURid. Seller also declares to, until signing date of this agreement, not be aware or have been given notice of any (intended) decisions of EURid concerning the refusal of the use of the domain name and/or the deletion or withdrawal of the domain name with the electronic domain name register of EURid.

Buyer owes seller for selling and transferring a fee of **EUR 1.650,-**.

Buyer will pay this fee, **within 7 days** after signing this agreement, to BliXem Internet Services by transferring the amount to bankaccountnumber: 15.78.60.787 under the corporate name of BliXem Internet Services.

Bank: Rabobank
IBAN: NL85 RABO 0157 8607 87
Swift/Bic: RABONL2U

After receipt of the transferprice BliXem will set in the trade of the domainname following the EURid-procedure. BliXem guarantees that the amount paid by buyer will be kept in deposit. Only after the domaintransfer BliXem will pay the holder.

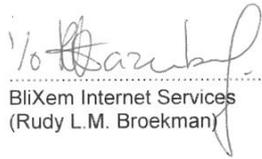
For the further registration of your domain we can offer you the first year of registration fully free of charge at one of our partners, VIP Internet. After this first year you will be charged for further years of registration according to the prices and conditions mentioned on their website. We are happy to set this up for you.

If you prefer to register the domain somewhere else, please make sure that you will transfer your domain within 14 days after signing the agreement.
In case you will not transfer the domain you acknowledge that the domain will be transferred to VIP Internet, who will take further care of the registration for you.

This agreement is solely subject to Dutch law. Differences will be presented to the authorised court in the district Arnhem.

Nijmegen, 2 November 2012

..... November 2012


.....
BliXem Internet Services
(Rudy L.M. Broekman)

.....
University of Freiburg
Kai Arras

4 Appendix B: Hosting Registration

Hosting, Online-Speicher, Webshop & Server - STRATO https://www.strato.de/ordering/bde5c089e2882f6e0d87f50138b5c9f37...

[Startseite](#) | [Über uns](#) | [STRATO Blog](#) | [Presse](#) | [Karriere](#) | [Empfehlen & Verdienen](#) | [Affiliate](#) | [STRATO Pro](#) | [Großkunden](#) | [FAQ](#) | [Kundenlogin](#)

Homepage-Baukasten
Mit LivePages zur eigenen Homepage
Domains
Domain & E-Mail
Hosting
Ihre Profi-Website
Webshops
Ihr Onlineshop
Online-Speicher
HiDrive - Die Online-Festplatte
Server
Server-Auswahl

Bestellung

Warenkorb

Hosting-Paket
PowerWeb Plus

Ihre Domain(s)
 spencer.eu [PW]

- Domains
- Paketauswahl
- Optionen
- Personalisierung

Bestellung abschließen

Empfehlen & Verdienen

Jetzt erfolgreich empfehlen und bis zu 120 € mit nur einer Empfehlung verdienen!

Mehr Informationen

Sie brauchen Hilfe?
Auf www.strato.de/kontakt finden Sie die passenden Experten-Rufnummern.

Oder nutzen Sie das MailCenter →

Bestellübersicht

	Ihre erste Rechnung		Folgerechnungen
	einmalig	erster Rechnungszeitraum	
Hosting-Paket			
Ihr neues Paket PowerWeb Plus * (Mindestvertragslaufzeit: 12 Mon.)		0,00 € für 6 Monat(e)	danach 59,94 € für 6 Monat(e)
<ul style="list-style-type: none"> 6 Domains inklusive (.de, .eu, .com, .com.de, .net, .org, .info, .biz) 50.000 MB Webspace 20 MySQL-Datenbanken 1000 Postfächer mit STRATO Communicator unlimited Traffic 			
Domain(s)			
Für die folgende Domains nehmen wir für Sie einen Providerwechsel vor			
spencer.eu		Inklusiv-Domain	
Zwischensumme	0,00 €	0,00 €	
	Rechnungssumme	0,00 €	Preise inkl. MwSt.

Die Abbuchung der Erstrechnung erfolgt in wenigen Tagen.

* Aktion bis 31.03.2013: PowerWeb Plus 6 Monate für € 0,-€, danach 9,99 €/Mon. Einmalige Einrichtungsgebühr 14,90 €. Mindestvertragslaufzeit 12 Monate. Preise inkl. MwSt.

Daten des Vertragspartners

Ihre Kundendaten

Universität Freiburg, Körperschaft des öffentlichen Rechts
Herr
Kai Arras
Georges-Köhlerallee 074
79110 Freiburg
Deutschland
arras@informatik.uni-freiburg.de
+49 (0761) 20397946
+49 (0160) 6997515

Ihre Zahlungsdaten

Bankname: LBBW/BW-Bank Stuttgart
Kontonummer: xxxxxxxx955
Bankleitzahl: 60050101

Ich habe die **AGB**, den Hinweis auf das **Widerrufsrecht** für Verbraucher sowie die **Datenschutzrichtlinien** der STRATO AG gelesen und akzeptiert.

Zurück
Jetzt kostenpflichtig bestellen

1 of 2

2013, Mar 13 19:02

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