

# telescon<sup>®</sup> 2009

VIENNA - AUSTRIA

## 4<sup>th</sup> International Telecommunication Energy Special Conference

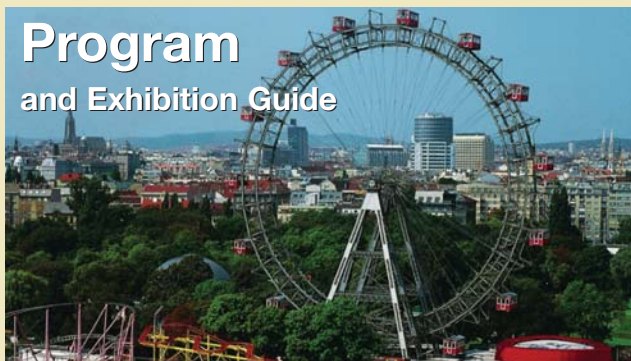
**POWER SUPPLY QUALITY AND EFFICIENCY**

a Satellite Conference to



May 10 - 12, 2009  
Hotel Golden Tulip  
Vienna All Suites Modul  
**Vienna, Austria**

## Program and Exhibition Guide



Organised by



**VDE**

**ITG**

In cooperation with



## Welcome to telescon® 2009 Vienna A message from the General Chairman

With great pleasure I am looking forward to seeing you at the telescon® 2009 in Vienna.

The 4<sup>th</sup> International Telecommunication Energy Special Conference will bring together European and international experts in the field of energy supply for telecommunication networks.

Vienna has been chosen as conference location because of its unique position as a geographical and cultural hub in Europe, linking eastern and western access easily.

The conference will focus on high-end technical sessions, workshops and open debates on power supply, energy storage and temperature management, safety, product innovation and thus will offer new insights, solutions and outlooks.

The effective and sustainable use of power is a basic challenge for everyone involved in the telecommunications industry. The growing demand for ICT for new multimedia services and the resulting expansion of digital traffic leads the telecommunications industry towards the convergence and optimization of traditional networks (fixed, mobile, Internet, broadcast etc.).

All this is pointed out by this year's motto

### "POWER SUPPLY QUALITY AND EFFICIENCY"

that has gained even more relevance by recent developments in the international market.

The conference is accompanied by an exhibition that will be an excellent meeting place for suppliers, partners and customers.

A typical Viennese "Heurigen" evening will be the social highlight on Monday, May 11. Combine your professional stay in Vienna with the experience of great Habsburg traditions, marvellous impressions in art and music and with vivid modern urbanity.

Let's gather strength for the future challenges in Vienna!



Yours sincerely,

### **Gunter Kappacher**

*General Chair telescon® 2009 Vienna  
Member of the Board at Siemens AG  
Österreich, President of the OVE*

## General Chair

Gunter Kappacher  
*Member of the Board at Siemens AG Österreich, President  
of OVE, Austria*

## Program Chair

Wilfried Schulz  
*ETSI EE Vice Chairman, Germany*

Rudolf Mörk-Mörkenstein  
*officially authorised consultant,  
generally sworn and court certified expert, Austria*

## Program Committee

Michael Bank  
*Northstar Battery Company, Germany*

Bernhard Böden  
*Power Innovation GmbH, Germany*

Stefan Göbel  
*Hawker GmbH, Germany*

Hans-Erich Goldstein  
*Lapisaurus Telekom Know How Sharing, Germany*

Thomas Kerren  
*b+w Electronic Systems GmbH & Co. KG, Germany*

Dieter Kölbl  
*STARK Power GmbH, Germany*

Rudolf Mörk-Mörkenstein  
*officially authorised consultant,  
generally sworn and court certified expert, Austria*

Hans Reustle  
*MTM Power, Germany*

Gunter Schmitt  
*Eitek Valere Deutschland GmbH, Germany*

Wilfried Schulz  
*ETSI EE Vice Chairman, Germany*

9:00 - 09:10 **Opening**

**Plenary Session I**

*Session Chair: Wilfried Schulz, ETSI EE Vice Chairman, Germany*

09:10 - 09:40 **Efficient Electrical Energy Options for High Power Reliability and Availability**

*Erik Höhne, envia Therm GmbH, Germany*

Erik Höhne is managing director of envia THERM, Halle/Saale since 2005. Being part of the enviaM-group (RWE concern) envia THERM concentrates the power generation business in the eastern part of Germany for its shareholder enviaM. Mr. Höhne holds different board functions within the group. From 2000 he was head of projects (generation department), enviaM. He started with the energy business in 1995 at RWE Energie AG, Essen, as a maintenance engineer for power plants. Erik Höhne studied mechanical engineering at RWTH Aachen.

09:40 -10:10 **Electrical Power Grids for the Future: Trends, Drivers & Solutions**

*Peter Menke, Siemens AG, Germany*

Peter Menke studied Physics at the Universities of Bonn, Kiel and California in Berkeley. He worked at Siemens Corporate Technology and Siemens Power Transmission and Distribution on optical sensors for high voltage applications especially series compensators. He was in charge of the development of new primary equipment and a new control and protection platform for reactive power compensation systems. In 2006 he joined the technology and innovation staff at board level and in 2008 he became the Innovation Manager of the newly formed Power Transmission Division of the Siemens Energy Sector.

10:10 - 10:40 **Directions and Implications for Power Systems - Efficient and Safe Energy for Telecommunication**

*Helmut Leopold, President GIT & Board-Member of Austrian Research Centers GmbH, Austria*

Helmut Leopold - born April 27th, 1963 in Hohenems, Vorarlberg, Austria. 1989 - degree in Computer Science - University of Technology Vienna, Austria. Married and 4 children. 1989 - 1994 "Alcatel Austria Elin Research Center" 1994 - 1998 "Alcatel Austria" 1998 - 2008 "Telekom Austria" - Since 2009 "Austrian Research Centers" - Head of Department Safety & Security. He acted in various international bodies like "Broadband Services Forum (BSF)", president of the IPv6 Task Force in Austria, teaching advisor for Telemanagement Forum (TMF)

10:40 - 11:10 **Coffee Break in the Exhibition Area**

**Plenary Session II**

*Session Chair: Dr. Rudolf Mörk-Mörkenstein, officially authorised consultant, generally sworn and court certified expert, Austria*

11:10 - 11:40 **Energy Saving, the past, present, future**

*Wilfried Schulz, ETSI EE Vice Chairman, Germany*

11:40 - 12:10 **ICT Getting Green**

*Reijo Maihaniemi, Efore Plc, Finland*

12:10 - 12:40 **An Overview of Battery Development placed in a historical Context and future Aspects**

*Stefan Göbel, Hawker GmbH, Germany*

12:40 - 14:00 **Lunch Break in the restaurant and Exhibition Area**

14:00 - 15:30 **Workshop 1:  
Energy Conversation - Sustainability in  
Telecommunication**

*Lendert Lam (KPN) and George Tiemstra,  
Netherlands*

15:30 - 16:00 **Coffee Break in the Exhibition Area**

16:00 - 17:30 **Workshop 2:  
AC versus DC Efficiency**

*Wilfried Schulz - ETSI EE Vice Chairman,  
Germany*

*Didier Marquet - France Telecom Orange,  
France*

*Reijo Maihaniemi, Efore Plc, Finland*

*Richard Mehl, E-T-A GmbH, Germany*

*Tadatoshi Babasaki, NTT Energy and  
Environment Systems, Japan*

19:00 - 23:00 **Conference Dinner at Heurigen "Weingut  
Wolff"**

## Tuesday, May 12<sup>th</sup> 2009

### Hall A + B

#### Batteries

*Session Chair: Stefan Göbel, Hawer GmbH,  
Germany*

08:30 - 08:55 **Reliable Power Supply for Remote  
Telecom Facilities**

*Wieland Rusch, Ingo Stahlkopf, BAE  
Batterien GmbH, Germany*

08:55 - 09:20 **Ohmic Testing Applications in VRLA  
Batteries Maintenance**

*Jian Gao, China Mobile Communications  
Group Co., Ltd, China; Longyun Yu, China  
Mobile Communications Group Zhejiang Co.  
Ltd, China*

09:20 - 09:45 **The Batterie's Regulatory Process in  
Brazilian Telecommunications Industry**

*Maria de Fatima N.C. Rosolem, Glauco  
Ribeiro dos Santos, Luiz Antonio Soares,*

*Luiz Eduardo Ferreira Dias Jr, Pamela Tobias  
Frare, Raul Fernando Beck, Vitor Torquato  
Arioli, CPqD, Brazil; Julio Cesar Fonseca,  
Anatel, Brazil*

09:45 - 10:10 **Improving the Characteristics of Lithium-  
ion Cells by Applying a Heat-resistant  
Separator and Heat Conductor**

*Toshio Matsushima, Tomonobu Tsujikawa,  
NTT Facilities Inc. R&D Headquarters, Japan*

### Hall C - E

#### Conversion Technology

*Session Chair: Bernhard Böden, Power  
Innovation GmbH, Germany*

08:30 - 08:55 **Variable Voltage PSU Technology for ICT  
Applications**

*Markku Kukkonen, Efore Plc, Finland*

08:55 - 09:20 **A Study of High Voltage Converter  
Topologies with Wide Input Voltage  
Range**

*Hiroyuki Osuga, Mitsubishi Electric  
Corporation, Kamakura Works, Japan;  
Isamu Terukina, Mitsubishi Electric  
Engineering Company Limited, Japan;  
Hiroshi Nagano, Japan Aerospace  
Exploration Agency, Japan*

09:20 - 09:45 **Method of Designing a Four-Legged  
Transformer for Hybrid-Type DC-DC  
Converters**

*Hiroshi Unno, H. Watanabe, Shindengen  
Mfg. Co., Ltd, Japan; H. Saotome,  
Y. Wakatsuki, Chiba University, Japan*

09:45 - 10:10 **Improved PFC Circuit for Three-Phase  
Single Switch Having Auxiliary  
Capacitors**

*Keiju Matsui, Masaru Hasegawa, Chubu  
University, Japan; Fukashi Ueda, Hideki Mori,  
Chubu Electric Power Co. Inc., Japan*

10:10 - 10:40 **Coffee Break in the Exhibition Area**

## Hall A + B

### Batteries and other Energy Storage Systems

*Session Chair: Dieter Kölbel, Stark Power GmbH, Germany*

- 10:40 - 11:05 **Uninterrupted power supply - supported by fuel cells**  
*Peter Beckhaus, Thorsten Notthoff, Sina Souzani, Angelika Heinzl, ZBT GmbH, Germany; Bernhard Böden, Power Innovation GmbH, Germany*
- 11:05 - 11:30 **Fuel Cell Back-up Power**  
*Dirk Weniger, b+w Electronic Systems GmbH & Co. KG, Germany*
- 11:30 - 11:55 **Novel Voltage Balancer for Electric Double Layer Capacitor by Using Forward Converter**  
*Keiju Matsui, Hiroto Shimada, Masaru Hasegawa, Chubu University, Japan*
- 11:55 - 12:20 **Investigation into technical factors related to stationary lithium-ion battery used in telecommunications applications**  
*Tomonobu Tujikawa, Kahou Yabuta, Takashi Matsushita, Toshio Matsushima, NTT Facilities, Inc., Japan; Masayasu Arakawa, NTT Facilities Research Institute Inc., Japan; Koji Hayashi, Shin-Kobe Electric Machinery Co. Ltd., Japan*

## Hall C - E

### AC/DC Power Supplies / Power Quality and Efficiency

*Session Chair: Rudolf Mörk-Mörkenstein, officially authorised consultant, generally sworn and court certified expert, Austria*

- 10:40 - 11:05 **Increasing grid transmit capability and power quality by new solar inverter concept and inbuilt data communication**  
*Norbert Grass, Georg-Simon-Ohm University Nuremberg, Germany; Georg Kerber,*

*Rolf Witzmann, Technical University Munich, Germany; Markus Sebeck, iAd GmbH, Germany; Reinhold Keck, Siemens AG, Germany*

- 11:05 - 11:30 **Evaluation of dc Voltage Levels for Integrated Information Technology and Telecom Power Architectures**  
*Alexis Kwasinski, The University of Texas at Austin, USA*
- 11:30 - 11:55 **Scientific methodology for Telecom service energy consumption and CO2 emission assessment including negative and positive impacts**  
*Didier Marquet, Marc Aubree, France Telecom Orange Labs, France; Jean-Pierre Frangi, Xavier Chavanne, Universite Paris Diderot, France*
- 11:55 - 12:20 **Site Power Saving**  
*Fabio Pizzuti, Telecom Italia SpA, Italy*
- 12:20 - 14:00 **Lunch Break in the restaurant and Exhibition Area**

## Hall A + B

### UPS & Converters

*Session Chair: Bernhard Böden, Power Innovation GmbH, Germany*

- 14:00 - 14:25 **A New Multi-Loop Digital Control DC-DC Converter**  
*Fujio Kurokawa, Shohei Sukita, Junya Sakemi, Nagasaki University, Japan*
- 14:25 - 14:50 **Efficient powering of communication and IT equipments using rotating UPS**  
*Enrico Blondel, C. Monney, Swisscom (Schweiz) AG, Switzerland*
- 14:50 - 15:15 **Increased MTBF and Decreased Maintenance Cost by using Systems without fans**  
*Joerg Umbreit, Gustav Klein GmbH & Co. KG, Germany*

15:15 - 15:40 **Fuel-cells in the required packaging**  
*Siegfried Suchanek, Thomas Welsch,  
Günter Siegmund, Rittal GmbH & Co. KG,  
Germany*

#### Hall C - E

##### **UPS & Converters / EMC-Product Safety / Standards**

*Session Chair: Gunter Schmitt, Eltek Valere  
Deutschland, Germany*

14:00 - 14:25 **Overview to ETSI Standards and Guides for Efficient Powering of Telecommunication and Datacom Equipment and Building**  
*Wilfried Schulz, ETSI EE Vice Chairman,  
Germany*

14:25 - 14:50 **The new product safety standard for Information and Communication Technology equipment**  
*Wilfried Schulz, ETSI EE Vice Chairman,  
Germany*

15:40 - 16:10 **Coffee Break in the Exhibition Area**

#### Hall A + B

##### **Alternative Power Sources for Telecom Networks**

*Session Chair: Bernhard Böden, Power  
Innovation GmbH, Germany*

16:10 - 16:35 **The Green Base Station**  
*Gunter Schmitt, Eltek Valere Deutschland,  
Germany*

16:35 - 17:00 **On Chip Micro Power Generator for Smart Pavement Material (SPM)**  
*Hassan R. Homami, George Moglia,  
Parsons Brinckerhoff, USA; David Crouse,  
City College of New York, USA;  
Nadereh Moini, Rutgers University, USA*

17:00 - 17:25 **Energy Efficient Power System Solutions**  
*Dirk Weniger, b+w Electronic Systems  
GmbH & Co. KG, Germany*

17:25 - 17:50 **Application of new technologies as primary and backup power supply in Telecom Installations**  
*Dieter Braechtken, Downstream UG,  
Germany*

#### Hall A + B

##### **Operation Maintenance / Thermal-management**

*Session Chair: Wilfried Schulz, ETSI EE Vice  
Chairman, Germany*

16:10 - 16:35 **Development of -48-V DC power supply system for high power ICT equipment**  
*Tadatoshi Babasaki, Toru Tanaka,  
Toshimitsu Tanaka, Yousuke Nozaki, NTT  
Energy and Environment Systems  
Laboratories, Japan; Fujio Kurokawa,  
Nagasaki University, Japan*

16:35 - 17:00 **The next generation smart telecom power distribution with solid state hypride circuit breakers and the contribution to pwer and facility management**  
*Richard Mehl, E-T-A GmbH, Germany*

17:00 - 17:25 **Thermal and energy management system based on low cost Wireless Sensor Network Technology, to monitor, control and optimize energy consumption in Telecom Switch Plants and Data Centres**  
*Fernando Genova, Fabio Luigi Bellifemine,  
Marco Gaspardone, Maurizio Beoni, Alberto  
Cuda, Gian Piero Fici, Telecom Italia, Italy*

17:25 - 17:50 **U.S. Gulf Coast Telecommunications Power Infrastructure Evolution since Hurricane Katrina**  
*Alexis Kwasinski, The University of Texas at  
Austin, USA*

#### Hall A + B

17: 50 - 18:15 **Summary Session**

## GENERAL INFORMATION

telescon@ 2009 website

www.telescon2009.at

## REGISTRATION FEES

	before April 14, 2009	after April 14, 2009
Associated Society Member (VDE, OVE, IEEE)*	590,-- Euro	690,-- Euro
Non member	760,-- Euro	860,-- Euro
Presenting author	590,-- Euro	690,-- Euro
Student	200,-- Euro	240,-- Euro
Excursion 1 - Music Theatre Ronacher	30,-- Euro	30,-- Euro
Excursion 2 - Traffic telematics	30,-- Euro	30,-- Euro
Accompanying Person Welcome Reception, May 10 <sup>th</sup>	30,-- Euro	30,-- Euro
Accompanying Person Conference Dinner, May 11 <sup>th</sup>	40,-- Euro	40,-- Euro
Additional Proceedings (CD ROM)	50,-- Euro	50,-- Euro

- \* Participants applying for the membership fee must include a copy of their membership card to the registration form.
- Presenting authors, co-authors, committee members and session chairs are not exempted from paying registration fees.

### Regular Conference Registration and Student Registration

Includes admission to all technical sessions as well as to the daily luncheons and coffee-breaks, one copy of the proceedings (CD-ROM), telescon 2009 conference welcome reception on Sunday, May 10<sup>th</sup> at the Hotel Modul in the exhibition area and conference dinner at Heurigen "Weingut Wolff" on May 11<sup>th</sup>.

## CONFERENCE REGISTRATION

To register for telescon 2009 please use the online registration. To enjoy the "early-bird-discount", VDE Conference Services must receive your registration before April 14th, 2009. Full payment by credit card is obligate in order to receive a confirmation of registration.

## ON-SITE COUNTER - OFFICE HOURS

The registration counter is located in the Hotel Lobby of the Hotel Modul.

**Phone: +43 - 1 47 660-6060**

**Fax: +43 - 1 47 660-757**

**E-mail: vde-conferences@vde.com**

The registration desk on site will be open as follows:

Sun, May 10 <sup>th</sup>	16.00 h - 20.00 h
Mon, May 11 <sup>th</sup>	08.00 h - 18.00 h
Tue, May 12 <sup>th</sup>	08.00 h - 18.00 h

## PAYMENT

Payment for registration must be made in Euro. The conference fee has to be fully paid in advance.

The following methods of payment are accepted:

- by credit card authorisation
- by cash payment on-site in Euro (€)

## BADGES

Delegates will receive badges and vouchers for the booked events. Participants are kindly requested to wear their badges throughout the conference, even at social events. Lost badges will not be replaced. A new registration will be mandatory.

## CANCELLATION

In case of cancellation, provided that written notice is received at VDE Conference Services before April 14th, 2009, the registration fee will be refunded less a handling fee of Euro 100,--. When cancelling after April 14th, 2009 no refund will be made. Proceedings (CD-ROM) will then be sent to the registrant after the conference.

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## PROCEEDINGS

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All papers accepted for presentation at the conference will be published in the proceedings (CD-ROM). The proceedings will be provided on-site to all registered delegates attending the conference.

Additional proceedings (CD-ROM) will be on sale during the conference (upon availability) at Euro 50,--.

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## OFFICIAL LANGUAGE

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All sessions will be held in English, only. No simultaneous translation will be provided.

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## HOTEL RESERVATION

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Rooms may be booked in the official conference Hotel Modul or the nearby Hotel Kaiser Franz Josef upon availability.

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## HOTEL BOOKING CONDITIONS

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### **Change of reservation and cancellation**

Please make your reservations, changes and cancellations directly with the hotels. The conference organiser is not responsible for hotel bookings.

### **Payment**

All payments related to accommodation have to be made directly on departure in the hotel. In any case a credit card is required for guaranteed booking, otherwise no booking confirmation will be returned.

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## telescon® 2009 CONFERENCE VENUE

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Hotel Modul  
Peter-Jordan-Str. 78  
1190 Wien  
Austria

Phone: +43 - 1 47 66 - 0  
Fax: +43 - 1 47 66 -117  
Homepage: [www.hotelmodul.at](http://www.hotelmodul.at)  
e-mail: [modulhotel@wkw.at](mailto:modulhotel@wkw.at)

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## MESSAGES

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Messages for delegates may be sent to the registration counter on-site:

**Phone: +43 - 1 47 660-6060**

**Fax: +43 - 1 47 660-757**

**e-mail: [vde-conferences@vde.com](mailto:vde-conferences@vde.com)**

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## WIRELESS LAN ACCESS

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Free Wireless Lan access will be provided in the Hotel Modul, the session rooms as well as in the rooms.

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## EXCURSION PROGRAM - Wednesday May 13, 2009

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### **Excursion – Music theatre "Ronacher" Backstage**

The "RONACHER" is an music theatre in the center of vienna. In the last 2 years an undergoing conversion took place, on 30th June, 2008 the RONACHER opened its doors following a complete refurbishment of its facilities. Now this theatre owns the modernst technical infrastructure with highly professional machine operation, lighting, sound and mechanics.

This excursion give us the possibility to visit this theatre "backstage" and we will have a look on technical details. The maximum number of people to attend the excursion is 35.

Link:

[http://www.musicalvienna.at/en/vbw/theater/t2cat707/t6\\_292](http://www.musicalvienna.at/en/vbw/theater/t2cat707/t6_292)



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## SOCIAL PROGRAM

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- The welcome reception on Sunday, May 10<sup>th</sup> will be held in the exhibition area at the Hotel Modul. All delegates are welcome to join this first ice breaker.
- On Monday, May 11<sup>th</sup> a conference dinner will be held at "The Weingut Wolff", a Viennese Wine Culture. A traditional wine grower's inn where a rich "Heurigen-buffet" as well as a selected menu is offered to its guests. Dishes range from the typical Viennese cookery to grills and good plain cooking in a pan. The romantic inner courtyard with its arcades, flooded by daylight, has been covered over by a sliding glass roof on order to be used throughout the year. All our guests will find their cosy corner be it besides the splashing fountain or at the wooden-fuelled fireplace. Wolff's wines originate from own growings in the vineyard locations of Neustift, Sievering, Grinzing, Nussdorf and Heiligenstadt.

A return transfer from Hotel Modul to "The Weingut Wolff" is included. Busses will leave at 18:30 in front of Hotel Modul.

The recommended dress for all telescon® 2009 social events is business casual.

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## DESTINATION VIENNA

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Welcome to Vienna, which has always been and continues to be a place where European history is made. Throughout the centuries, Viennese culture has exerted a strong influence on European arts and lifestyle. Among many others, the works of Strauss, Mozart, Beethoven and Schubert have made Vienna the musical capital of the world. In addition to its rich cultural heritage, from Lippizaner horses and famous museums to Hofburg and Secession, modern-day Vienna boasts the vibrant cultural scene of a 21st century metropolis.

Here you can find some suggestions for sightseeing. All details can be found on <http://www.vienna.info>

## Imperial Vienna

Walk in the footsteps of the Habsburgs, visit the splendid baroque Schönbrunn and Belvedere Palaces, or stroll along the magnificent Ring Boulevard and take a look at the heart of the former vast Habsburg empire, the Imperial Palace. Get a sense of the luster and glory of the old empire by visiting St. Stephen's Cathedral, the Spanish Riding School, the Giant Ferris Wheel at the Prater, as well as the sarcophagi in the Imperial Vault.

## The Ring

Stroll along Vienna's splendid boulevard and admire it as a window on the former Habsburg monarchy. In 1857, the city wall and its bastions were razed, and during the following years this splendid grand boulevard encircling the city was created. It contains a typical cross-section of government buildings, private mansions, spacious squares and parks, monuments and elegant cafés. Take a trip turn around the old city and see Otto Wagner's Post Office Building, the Museum of Applied Arts, Vienna's City Park, the Vienna State Opera, the Imperial Palace, the Museums of Fine Arts and Natural History, Parliament, the Burgtheater, the University and the Stock Exchange.

## Schönbrunn Palace

Visit Empress Sisi's former summer residence. This baroque complex contains an enchanting park, the Palm House, the Gloriette and a zoo. Spend an entire day at Schönbrunn: visit the show rooms with a "Grand Tour with Audio Guide," admire the splendid Bergl Rooms, and stroll through the "Labyrinth." Schönbrunn, the former summer residence of the imperial family, is considered one of the most beautiful baroque palaces in Europe. The Habsburgs resided here the better part of the year in numerous rooms for the large imperial family in addition to representational rooms. Emperor Franz Joseph, who later married the enchanting Sisi and reigned from 1848 to 1916, was born here in 1830. The monarch spent his last years entirely in the palace, which became the property of the new Republic of Austria only two years after his death. Today, the palace is part of UNESCO's cultural heritage due to its historic importance, its unique grounds and its splendid furnishings.

## **St. Stephen's Cathedral**

St. Stephen's Cathedral, Austria's most eminent Gothic edifice, houses a wealth of art treasures, some of which can only be seen during a guided tour:

The red-marble sepulcher of Emperor Frederick III, sculpted from 1467 to 1513 by Niclas Gerhaert van Leyden; the pulpit, a work from 1514-15 by Anton Pilgram (who put his own relief portrait underneath it as his signature); the Altarpiece of Wiener Neustadt (Wiener Neustädter Altar), a Gothic winged altar from 1447 - and the tomb of Prince Eugene of Savoy, dating from 1754.

Tipp: climb the 343 steps to the tower-keeper's room of St. Stephen's and enjoy a breathtaking view...

## **Spanish Riding School**

The Spanish Riding School in Vienna with its famous Lipizzan ballet can be experienced live in the baroque ambience of the Imperial Palace. Admire riding skills of the highest order - from pirouettes to caprioles.

The Spanish Riding School in Vienna is the only institution in the world where the classic equestrian skills (haute école) has been preserved and is still practiced in its original form. Many years of training fuse horse and rider into an inseparable unit. The audience is treated to an unforgettable experience by the precision of movement of the Lipizzan horses in perfect harmony with the music. In the course of gala performances, visitors experience unique presentations of the Lipizzans in the most beautiful riding hall in the world, which was impressively outfitted by baroque architect Joseph Emanuel Fischer von Erlach between 1729 and 1735. It was originally built to provide aristocratic youths with the opportunity to take riding instruction. Morning training with music gives a good impression into the training program of the White Stallions; the guided tours include visits to the stables.

Dates for performances and morning training as well as information on how to obtain tickets at [www.srs.at](http://www.srs.at).

At the Sacher Café at the Spanish Riding School, you can enjoy a piece (or two) of the famous Sachertorte.

## **The Giant Ferris Wheel & the new Prater Ferris Wheel Square**

You may want to visit this landmark of Vienna in the footsteps of the immortal movie "The Third Man" or simply enjoy the view of the city from almost 200 feet up. One thing is certain - only when you have taken a ride on Riesenrad are you really in Vienna!

The Giant Ferris Wheel is open year round and is one of the most frequented attractions in the Danube metropolis. Ferris Wheel Square was redesigned in 2008. Now this entrance to the Prater amusement park is a nostalgic theme world reminiscent of the Prater in the year 1900.

## **Belvedere**

See Gustav Klimt's legendary painting "The Kiss" as well as major works by Schiele und Kokoschka for yourself. You'll be delighted by the magnificent ba-roque palace complex and its extensive gardens.

Prince Eugene of Savoy (1663-1736), successful general and art connoisseur, had Belvedere garden palace built by Johann Lukas von Hildebrandt as his summer residence - at the time it was still outside the gates of the city.

This baroque architectural jewel consists of two palaces (Upper and Lower Belvedere), which today house Austrian art from the Middle Ages to the present day.

Upper Belvedere - world's largest Klimt collection

At the heart of the collections at the Belvedere are the works of Gustav Klimt with his golden paintings "The Kiss" and "Judith". The masterpieces by Schiele and Kokoschka as well as works of French Impressionism and highlights of the Vienna Biedermeier era (Waldmüller, Amerling, Fendi) that you will see here are every bit as impressive as the paintings of Makart, Boeckl, Wotrubka, Hausner, Hundertwasser and others.

Masterworks of late Gothic art like the Znaim Altar, works by Michael Pacher, Rueland Frueauf the Elder and Conrad Laib are also on display here, along with lavish works of art dating from the baroque age. Significant works by Johann Michael Rottmayr, Daniel Gran and Paul Troger give a fascinating insight into the wealth of these times. The grimacing character heads by the sculptor Franz Xaver Messerschmidt are also very emotive.

Lower Belvedere - Prince Eugene's apartments and state-rooms

The feudal splendor of the palace's aristocratic owner is reflected in the Hall of Grottesques, the Marble Gallery, and the Golden Room. Intriguing special exhibitions are staged in the Lower Belvedere and the Orangery.

Palace stables - Medieval Study Collection

The stables once housed the prince's 12 finest horses: today you will find the Belvedere's entire medieval art collection here.

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### WEATHER

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The weather in Vienna in May is usually beautiful and warm. However, there might be chilly and rainy days. The temperature can range between 10C° and 20C°. Please check the actual weather on [www.weather.com](http://www.weather.com)

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### INSURANCE

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The organisers may not be held responsible for any injury to participants or damage, theft and loss of personal belongings. Participants should therefore make their own insurance arrangements.

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### SHOPPING

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Vienna is an ideal city to go on a leisurely stroll through the shops - on Vienna's famous Kaerntner Strasse - the noble shopping street you will discover an immense variety of pleasurable shopping opportunities. For more details please visit [www.vienna.at](http://www.vienna.at). Shops are generally closed on Sunday.

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### CURRENCY

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The official currency in Germany is the Euro (€). Usual credit cards (Mastercard, American Express, VISA) are accepted in hotels, department stores and restaurants. Currently (April 2009) the exchange rate is  
1 Euro  $\cong$  1,30 US\$

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### ELECTRICITY / PHONE PATCH

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The mains power supply is 230 V AC, 50 Hz. Participants intending to use the internet are kindly asked to have connectors available for the mains and Texas or TAE 6 (Austrian phone standard) to connect the phone grid on analogue basis. Digital access (ISDN) may be available on request. Connectors are available at most international airports or department stores. Most hotels have TAE 6 plug in the rooms or business centre.

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### EMERGENCY SERVICES

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Police	call 133
Ambulance	call 144
Fire Brigade	call 122

## EXHIBITORS

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## EXHIBITORS

### BAE Batterien GmbH, Germany



BAE Batterien GmbH is a traditional manufacturer of high quality industrial batteries located in Berlin/Germany. The product range comprises vented and valve regulated lead-acid batteries for stationary applications as well as batteries for solar photovoltaic systems. The company is DIN EN ISO 9001:2000 and DIN EN ISO 14001:2005 certified.

### Eaton Power Quality GmbH, Germany



Eaton's electrical business is a global leader in electrical control, power distribution, uninterruptible power supply and industrial automation products and services. The product portfolio includes a full line of AC and DC power systems, power management software, remote monitoring, turnkey integration services and site support.

## EXHIBITORS

### EnerSys GmbH, Austria



EnerSys® is the global leader in energy storage and first choice for customers worldwide. Our extensive product range is backed by more than 100 years experience of battery manufacturing and innovative technology. Our world-renowned PowerSafe, DataSafe, Genesis, and Varta brands are used in telecommunications, IT, utilities, uninterruptible power supplies, and general electronics applications.

### Exide Technologies GmbH, Germany



Exide Technologies, with operations in more than 80 countries, is one of the world's largest producers of lead-acid batteries. The Company's global business groups provide a comprehensive range of stored electrical energy products and services for industrial and transportation applications. Industrial markets include network power applications such as telecommunications systems, photovoltaic and uninterruptible power supply.

## EXHIBITORS

### Georg-Simon-Ohm-Hochschule Nürnberg, Germany



The Institute for Electronic Systems (ELSYS) by the Georg Simon Ohm University of Applied Sciences in Nuremberg is dealing in practical researches and development with systems of power electronics, drive engineering, microelectronics and software

The key aspects of activity are energy efficiency, net integration of decentralized energy systems, net quality and management, hybrid and electric drives, rapid prototyping for power electronic systems, measuring, analyzing and test systems.

### Gustav Klein GmbH & Co. KG, Germany



GUSTAV KLEIN develops and produces uninterruptible power supplies UPS, for DC-and AC load until 2 MW, high power test systems for DC and AC, frequency converters, rectifiers, inverters, DC-converters in Germany and Austria. Applications: telecommunication, railway systems, hospitals, industrial application, power plants, chemical industry, as well as test and laboratory.

## EXHIBITORS

### KESS Power Solutions GmbH, Austria



KESS Power Solutions GmbH - Eaton's successful Sales- and Service-partner for many years - is an Austrian IT-company, which is engaged with security concepts for networks, process control systems and computing, as well as solutions for electric power supplies and electrical engineering.

### LionTec GmbH, Germany



Manufacturer of Lithium-Ion Batteries in Capacities from 10 Ah to 100 Ah and battery voltages of 12 V, 24 V, 48 V and larger batteries for motors and drives up to 388 V. The plastic material of battery housing is in UL-94 VO, 19 "housing are made of metal.

Deployed cell technologies are: LiCoO<sub>2</sub>, LiCoNiO<sub>2</sub>, LiMn<sub>2</sub>O<sub>4</sub> and LiFePO<sub>4</sub>.

## EXHIBITORS

### Mitra Energy & Infrastructure s.c.a., Belgium



With 40 years experience in SMPS technology, MITRA E&I is a leader in innovative solutions to power and manage remote sites of access networks. Mitra works closely with major network operators and local value added resellers to bring the best combination of products and services to each customer.  
[www.mitra-ei.com](http://www.mitra-ei.com)

### Phoenix Contact GmbH & Co. KG, Germany



Phoenix Contact GmbH & Co. KG is a worldwide leading manufacturer of electrical connection technology, electronic interface and industrial automation technology. Founded at the beginning of the 1920s in Essen the company now employs 10200 people worldwide, of which more than 5600 in Germany.

## EXHIBITORS

Power Innovation Stromversorgungstechnik GmbH,  
Germany



Innovative developments in the field of UPS technology and power electronics were the basis for the foundation of the company in 1987. Utilising the latest technology, our flexible and creative staff develop, manufacture and sell innovative, high quality products in the field of power electronics.

We are well positioned to participate in the growing European market. Due to close customer cooperation we see ourselves as a qualified partner for

- Power Supply systems
- Rectifier, optimized for use in outdoor enclosures
- DCDC-Converter
- Inverter-Systems
- and new developments.

Power-One s.r.o., Slovakia



Power-One is one of the world's largest power conversion solution providers. Power-One's advanced rectifiers save energy to telecommunications network by providing high efficiencies across a wide range of operating conditions. Additional features include high power densities, industry-leading reliability, and the capability to operate in environments with poor power-grid quality.

## EXHIBITORS

Rittal Schaltschränke Ges.m.b.H., Austria



Worldwide availability, proximity to customers, reliability and prompt reactions - just some of the secret ingredients behind Rittal's unprecedented rise to one of the world market leaders in the field of housing and enclosure systems. The product range today comprises seven separate business areas: **Industrial Enclosures, Electronic Packaging, System Climate Control, Power Distribution, IT Solutions, Communication Systems and Global Service Power.** And Rittal is always to be found in the front line when it comes to the development of new solutions for new technologies like RiCell a fuel cell system.

Wetac Int., The Netherlands



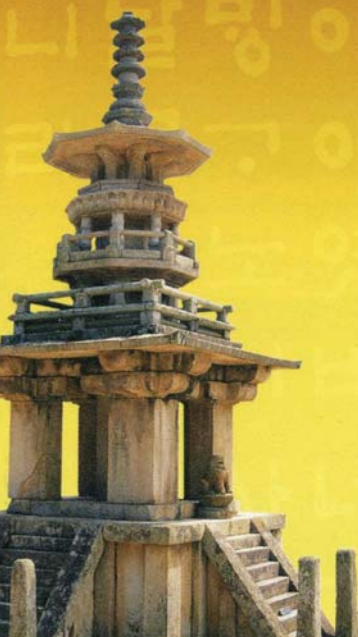
Wetac is a leading independent specialist for Sealed Lead Acid batteries in Europe. We represent Wing Batteries suitable for Telecom applications and UPS systems, also specialized in battery test equipment. From our central warehouse in EDE, The Netherlands we can deliver you immediate needs everywhere in Europe. And with sales offices in The Netherlands, England, Germany and distributors there will always be somebody to assist you on our products.



# intelec 2009

## International Telecommunications Energy Conference

October 18 (Sun.) -22 (Thu.), 2009,  
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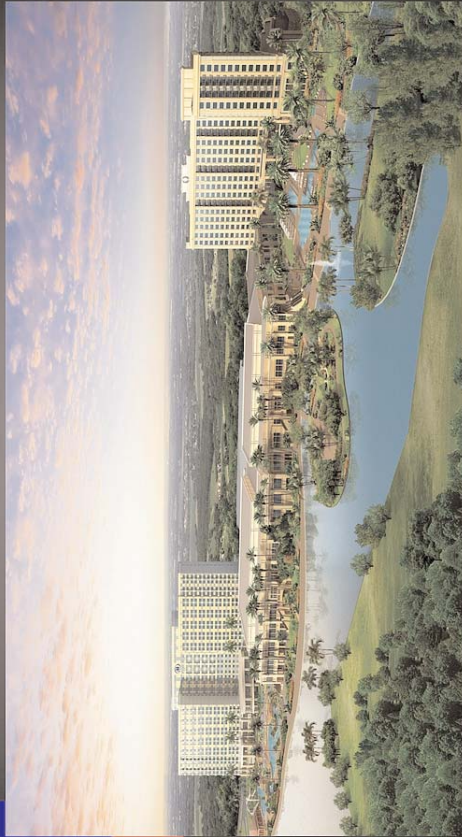
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# Conference Schedule TELESCON 2009, VIENNA

SUNDAY, MAY 10, 2009	MONDAY, MAY 11, 2009	TUESDAY, MAY 12, 2009	WEDNESDAY, MAY 13, 2009
<p>16:00 Registration 16:00 - 20:00</p> <p>18:00 Exhibition Opening Welcome Reception 18:00 - 20:00</p>	<p>08:30 Registration</p> <p>09:00 Opening Session Plenary Session I KEY NOTE</p> <p>09:10</p> <p>10:40 Coffee Break</p> <p>11:10 Invited Paper Hall A - E</p> <p>12:40</p> <p>14:00 WORKSHOP 1 ENERGY CONSERVATION Sustainability in Telecommunication Hall A - E</p> <p>15:30 Coffee Break</p> <p>16:00 WORKSHOP 2 AC versus DC EFFICIENCY Hall A - E</p> <p>17:30</p> <p>19:00 HEURIGEN 19:00 - 23:00</p>	<p>08:30</p> <p>10:10</p> <p>10:40</p> <p>12:20</p> <p>14:00</p> <p>15:40</p> <p>16:10</p> <p>17:50</p> <p>18:15</p>	<p>08:30</p> <p>12:00</p>
	<p>Exhibition 10:00 - 18:00</p> <p>Technical Session I Batteries Hall A + B 4</p> <p>Conversion Technology Hall C - E 4</p> <p>Coffee Break</p> <p>Technical Session II Batteries and other Energy Storage Systems Hall A + B 4</p> <p>AC/DC Power Supplies Power Quality and Efficiency Hall C - E 4</p> <p>Lunch</p> <p>Technical Session III UPS&amp;Converters Hall A + B 4</p> <p>UPS&amp;Converters/ EMC- Product Safety/Standards Hall C - E 4</p> <p>Coffee Break</p> <p>Technical Session IV Alternative Power Sources for Telecom Networks Hall A + B 4</p> <p>Operation-Maintenance/ Thermalmanagement Hall C - E 4</p> <p>SUMMARY SESSION 4</p> <p>Exhibition 10:00 - 18:00</p>	<p>EXCURSION or INDIVIDUALS</p> <p>Music theatre "Ronacher" Backstage</p> <p>END</p>	