

SCHNABEL AG


Information for customers and partners of SCHNABEL AG



Editorial



Dear flash readers,

It's been a long wait – but it's finally finished. Germany's first model data center, the DataCenterModel – is open! Inside you can read more about the official opening, the origins and the idea behind this unique project – or why not

form your own impression – we look forward to welcoming you!

Besides pursuing its own projects, SCHNABEL AG also supports a large number of functions and will be sponsoring two major events this year – the DataCenterDynamics in Frankfurt and Bangalore as well as this year's BITKOM IT Infrastructure Forum. In addition, SCHNABEL AG will also be giving expert presentations at both events. This edition also contains another project report – this time we're presenting the major Equinix project and we'll be giving you an account of our planning team's different tasks. As usual, you can read more news on everything to do with SCHNABEL AG and its partners by visiting our internet website www.schnabelag.de. Please look in regularly – it's worth it.

Sincerely,



Berthold Birkelbach / Chief Executive Officer

Experience data center technology at first hand – from now on that's something everyone will be able to do.

On September 9th SCHNABEL AG and 16 partner organizations opened the first model data center in Germany. In attendance were 160 guests, among them clients and partners of the 17 companies involved, as well as the press. They had all gathered to experience live and for the first time, this unique showroom on the site of Equinix (Germany) GmbH.

Harry Schnabel, who initiated and masterminded the model data center, kicked off the event and opened the DataCenterModel to the public. The guests were taken on tours of the model data center to give them a first impression of the wide

range of equipment on display. State-of-the-art and energy-efficient technologies such as HVAC, power, fire prevention, cabling and control systems all concentrated in one small space – people were deeply impressed and excited.

What is a data center and what does it look like on the inside? What does it take to make one really work? The new DataCenterModel helps provide clear, concrete answers.

If you're interested in visiting the showroom, simply contact us and we'll arrange a visit date for you and tell you how you can benefit from the DataCenterModel.

You will find further information on this project under www.datacentermodel.de



Change of scene for your Data Center

More and more companies decide to outsource their data center services.

Failsafe infrastructure, highest possible availability, minimized entrepreneurial risk at affordable conditions – that's any data center operator's dream. But it's not at all as impossible as it seems! Data center provider Equinix, for example, offers optimal environmental conditions for its clients' IT systems. Throughout Europe the organization maintains 14 fully comprehensive data centers equipped to the highest standards. At present they are used by over 450 clients. Equinix also runs a data center operation in Frankfurt – and it has been so successful that it has long since run out of space.



Equinix decided to utilize existing premises and commissioned SCHNABEL AG to convert the 7000m² of IT space to comply with TIA standard 942 (tier III and tier IV) while maintaining high levels of cost effectiveness and flexibility. SCHNABEL's tasks included preliminary planning, concept design, planning permission application documentation as well as the site management of works, architecture, electrical engineering, HVAC and security technology. For a year now, the SCHNABEL team has been meeting the challenges involved in the implementation of this major project which is scheduled to be completed in a total of 24 months. The greatest challenge – the data center is to remain operational throughout. For the architecture, electrical engineering and

cooling technology phases, SCHNABEL AG carried out an initial assessment of the facility's existing technical infrastructure in both the floor area and the core facilities such as central refrigeration and plant rooms. At the second stage, a step-by-step process was employed to develop a graphic solution encompassing all the special technical requirements. The integration of the facility's specialist infrastructure had to be included in the planning. After that, all the systems and installation components were finalized, calculated and dimensioned.

The team then produced drawings and descriptions of all the adopted measures. A plan was drawn up to facilitate their integration into the existing installations. Then all the service conduits were specified and dimensioned for the project as a whole, and the required capacity reserves calculated to allow for potential increases in operational demands. The designated baseload of the data center area was set at 1500 W/m², scaleable to 2000 W/m² or even up to 4000 W/m² in some places. SCHNABEL AG developed options to cater for potential increases in operational demands in the individual IT spaces. Coordinating the ducting and load specifications required for the structural design and producing the plans identifying the structural openings was also part of the task. Together with Equinix we talked through the areas requiring attention, so that approvable solutions could be agreed.

A cost calculation to DIN 276 was produced and a functional description drawn up for each section of the facility's floorspace. The required bills of materials, broken down according to the different project phases and sub-phases were also drawn up in accordance with the client's specifications. SCHNABEL AG then invited offers, made contract award recommendations and then supported Equinix throughout the ensuing negotiation process as well as in the final commissioning of suitable contractors.

The project itself was also executed under the watchful eye of the planners, who provided construction management services for the architectural, electrical, cooling and interior finishing phases as well as for the IT systems, fire suppression and alarm systems. This is quite a challenge, as there are different, specialist contractors working in each area and they all need to be supervised and coordinated.

SCHNABEL AG also has the responsibility of ensuring that plans, specifications and execution all harmonize well. The team's tasks include drawing up construction time schedules, schedule adherence monitoring, overseeing access authorization and providing quantity surveying services. As unforeseen issues are always a possibility, no matter how careful the preliminary planning, SCHNABEL AG keeps



a logbook in which each step of each sub-project is meticulously planned, processes optimized, worst-case scenarios and appropriate contingency plans simulated and revised – only when this has been completed can the actual implementation phase begin.

Cost control, final cost calculation, expert final acceptance inspection of the completed work in consultation with the client, the compilation of deficiency lists, reviewing and clearance of invoices, verification and handing over of audit documentation, preparing lists of limitation periods and supervising the remedying of construction deficiencies round off SCHNABEL AG's operational profile here.

The Equinix project shows how our planning teams work: we provide the client with a comprehensive consultation service, assume complete organizational responsibility using a cross-technological approach and see the project through to completion. SCHNABEL AG's main concern is to provide tailor-made solutions, for as the Equinix project illustrates yet again, there are no patent solutions in data center planning. When planning, it is essential to meet the specific requirements of the project in question and to take account of individual needs, in order to create the ideal data center for the client.

Rainer Winter / Project engineer

Silbersponsor SCHNABEL AG

SCHNABEL AG lecture on the distinctive characteristics of the Indian market and cooling systems.

At the end of September this year, SCHNABEL AG once more took on the role of Silver Sponsor at the DataCenterDynamics in Frankfurt and Bangalore.

In Bangalore, Shaheen Meeran, managing director of DC consultants SCHNABEL India Ltd., gave a talk entitled "Energy Efficiency in Data Centres – Global Trends and Indian Context". This lecture took a closer look at the distinctive characteristics of the Indian market and highlights the chances it offers. This was the second time that Schnabel's Indian subsidiary was represented at Bangalore and, once more, we got to know a lot of interesting exchanges and insights into new developments on the Indian data center market.

Four days later in Frankfurt, the project engineer Thomas Rezentanz reported on "The energy saving characteristics of different refrigeration and cooling systems from an eco-



nomical perspective". Providing cooling for data centers is a complex affair. Choosing the optimum installation system for a particular application – from refrigeration through cooling distribution right up to the end-user - can only be sensibly done by considering the system as a whole.

And yet people are often content simply to compare individual components (chillers or recirculation air handlers) although the conclusions which one can draw from such comparisons are only limited. This was the fifth time this event had taken place in Frankfurt and each year it has grown both in size and significance. This year around 500 visitors from the industry attended, all hoping to learn about the latest trends and technological developments.

Trends and the future in the IT branch

SCHNABEL AG sponsors BITKOM-Forum IT-Infrastructure in Frankfurt and informs about certifications.

The third BITKOM Forum IT-Infrastructure takes place on November 27th 2008 in Frankfurt. SCHNABEL AG will be supporting the forum as a sponsor this year and will also be giving an expert presentation on the subject of "Certification".

IT executives and decision makers from end-user organisations will be able to inform themselves on all aspects of "trends in IT – the future in IT" which are this year's key issues. For decades, no other branch has been in such a state of constant change as the IT branch.

Nowadays, technologies, management concepts and the demands on personnel all change within very short periods of time. The

user forum "Trends in IT – the future in IT" offers a platform where current developments, mid and long-term trends in IT can be presented and common visions developed.

Experts, suppliers and users will be giving talks on and discussing the topics of virtualisation, data management & storage solutions, IT management & automation, high availability and security, office of the future and Green IT. You can register for the event by contacting Bettina Schönberger under b.schoenberg@bitkom.org or by fax at 030/27576-500. Attendance is free of charge.



SCHNABEL's Ratingen branch moves

PKA and SCHNABEL AG under one roof in Essen.

SCHNABEL AG's branch in Ratingen has relocated and has started work again in the existing premises of our subsidiary company PKA Karnasch in Essen.

This has benefits for both parties – the premises in Essen are now being fully utilized, costs can be cut and internal communication has also become faster and more flexible.



Our clients can now contact the branch under the following address:

SCHNABEL AG
Hohenzollernstraße 42
D - 45128 Essen

Phone: 0201 87 87 27 0
Fax: 0201 87 87 2 99

Interview

In this issue we talk to Harry Schnabel, company's founder and initiator of the DataCenterModel in Frankfurt.

Flash: Mr Schnabel, the DataCenterModel is open. You are the initiator of this great project. Can you tell us briefly how you came to do it and what your motivation was?

Harry Schnabel (HS): The idea for the DataCenterModel started taking shape over 30 years ago. Even back then, I envisaged creating a showroom like the DataCenter Model. I wanted an exhibition space where all the latest data center technology could be shown. And in such a way that it would be easily understandable for anyone interested.

Thirty years ago perhaps the time was not right - data centers were still too much of an abstract concept, IT had not assumed such an essential position in the heads of the leaders of enterprise, people and work processes were not as dependent upon data centers as they are today. I was always convinced that one day it would be built, so I'm all the happier about the successful result.

Flash: So what's the idea behind this model data center?

HS: Even today, not many people really know what a data center is, what it contains or how it works. So there seems to me to be all the more need for a model data center such as the DCM. In the past, if I had a client who wanted to build a new data center or retrofit his existing installation to the latest standards, it was difficult to give him a satisfactory demonstration. Where should one go? Ideally, all data centers should be equipped with adequate access control systems. After all, they contain sensitive data and who, in his right mind, would want to let strangers into such areas? Gaining access to an operational data center is thus becoming increasingly problematic. The only remaining option is to put together your own showroom - a place where you can show your customers exactly what you want to show them and what they're interested in seeing.

Together, 17 partners have set themselves the task of presenting the complex world of the data center, not in an abstract way, but as realistically as possible. So that everyone can understand it.



Personal Data

Harry Schnabel founded SCHNABEL AG in 1973 and since 2004 he has looked after the setting up of our foreign operations in Dubai, UAE, India, Hungary, Romania and Kazakhstan. Harry Schnabel is also chairman of the BITKOM working group on reliable data centers and chair of the steering committee.

Here in the DataCenterModel, our focus is not on the hard- or software. Our interests centre upon those physical infrastructure technologies such as HVAC and power supply on which the successful operation of IT and communications systems depends. What should the infrastructure and the building services technology look like and how should it be structured so that the client can operate a state-of-the-art, high-availability data center.

Flash: So what were the greatest challenges in this project?

HS: Finding 17 partners who were willing to get involved in the project and realising it in such a way

as to do justice to all their individual needs and interests. It's like this: the participating companies have all invested a great deal of time and money in making this project the resounding success it so clearly is. Of course we've had our difficulties and we've obviously had to do a lot of talking and negotiating - but that's what makes such a project so stimulating.

This project represents a considerable financial investment for the partners involved. In addition to providing the products free of charge, they have shown unparalleled commitment in fitting out the rooms. The partners have gone to great lengths, both financially and otherwise, to make this project what it is today: Germany's first model data center!

Flash: Now that it's open, do you have a vision of how the DCM should develop in the future?

HS: I envisage that our DCM will have a positive contribution to make to the planning, implementation and application of new technologies in the data center, because in future there will have to be permanent technological change as far as building services are concerned. This is the only way that we can hope to meet climate protection goals and keep the major cost factor energy to a minimum for operators. Ultimately, that is what the Green-IT discussion is all about.

www.datacentermodel.de

Locations

GERMANY

- Berlin
Contact person: Mr C. Zahn
- Essen
Contact person: Mr M. Niewiera
- Frankfurt
Contact person: Mr S. Krause
- Hanover
Contact person: Mr F. Urban
- Heilbronn
Contact person: Mr M. Betros
- Munich
Contact person: Mr C. Wegner

INTERNATIONAL

- Dubai
Contact person: Mr H. Radlinger
- Bangalore
Contact person: Mr G. Varvelli

 SCHNABEL AG

Headquarters

SCHNABEL AG

Hanauer Landstraße 187-189

D-60314 Frankfurt am Main

Ph.: +49 (0) 69 / 6 66 66 61

Fax: +49 (0) 69 / 6 66 20 91

E-mail: zentrale@schnabelag.de

Editing & Layout

SCHNABEL AG

Marketing Department

www.SCHNABELAG.de