I arrived at Munich, Germany in the evening of Tuesday, July 11, 2006. In 1999, I spent half an year at University of Linz, Austria, from where I visited this beautiful city quite often at the time.

The tallest man in our society, Dr. Clemens Ruppel of EPCOS AG gave me kind invitation. He is one of the principle researchers who made significant contributions for the advance of SAW technologies and grew EPCOS AG (formerly Siemens-Matsushita AG) to the worldwide leader in the SAW market. In the company, there are many talented SAW researchers, and we SAW researchers always pay much attention for their activities to know current status and future trends on state-of-the-art SAW devices.

In the morning of Wednesday, July 12, Clemens took me to the company, where I gave the following two talks:

1. SAW Device Simulation, Review
2. SiP/SoC Integration of SAW/BAW Devices

After a lunch break with Dr. Gerd Riha and Clemens, I had a deep discussion with core SAW researchers such as Dr. Carl Wagner, Dr. Werner Ruile and Dr. Thomas Bauer on SAW device modeling, design and characterization. It was filled with a lot of fun in technological sense as always. In the evening, Clemens and Werner invited me to the Hofbräukeller, where the Banquet of the 2002 Ultrasonics Symposium was held. Adding to Clemens’ girlfriend Christine, Werner’s wife Béatrice, daughter Julie and mother in law Hélène Rousseau also appeared. We enjoyed not only foods and beer but also international communications. Thanks Clemens for your hospitality during my stay in Munich.

I moved to Erlangen on Thursday, July 13, 2006. Prof. Robert Weigel of University of Erlangen-Nuremberg gave me the invitation. He directed a nice research group for RF technologies at University of Linz when I stayed in 1999, and moved to the University in 2002. I was astonished that he rebuilt a really wonderful research institute for electronics engineering from almost scratch only in last four years. As far as I know, he is the most workaholic professor, though his life style became somewhat mild after his marriage with Susanne.

Prof. Reinhard Lerch of the same University also gave me the invitation. He is also an active member of our society and his activities on the FEM analysis are well known. He was also with University of Linz until 2000, and I saw him quite often when I was there. At the time, his interest was mainly focused upon relatively low frequency ultrasonic devices. But now his activity is expanded to the RF region, and becomes closer to mine.

Prof. Weigel kindly suggested me to stay in his house in Nuremberg. When we arrived there, three old friends waited for us. First one is Prof. Mario Huemer, who sat next to me at University of Linz, and got his professorship in Prof. Weigel’s institute. Second one is Prof. Leo Reindl, University of Freiburg, who is a specialist on SAW wireless sensors. Last one is Prof. Mario Jungwirth, University of Applied Sciences, Wels,
Austria. He was a Ph-D student of Prof. Weigel when I was in Linz. Since his specialty is on the SAW device simulation, we discussed on SAW technologies quite often at the time.

Robert and Susanne invited us to a nice Spanish restaurant, where we enjoyed seafood and a lot of beer as if we went back to nice days in Linz.

On Friday, July 14, 2006, I gave a talk on SiP/SoC Integration of SAW/BAW Devices in the University of Erlangen-Nuremberg. Prof. Albrecht Winnacker of this university also attended my talk. He is a material scientist, and his main interest is crystal growth including piezoelectric crystals. Some readers may see him at the 2004 Chiba University Symposium. Prof. Gerhard Fischerauer, University of Bayreuth and his wife Alice also appeared. They were SAW researchers of EPCOS AG and moved to the University in 2002.

On Saturday, July 14, 2006, Robert and Susanne took me to Robert’s home town Ebermannstadt, about 30km north of Erlangen. Robert’s old friends and Prof. Fischerauer and his family also gathered, and we enjoyed an excursion around a mountainous area called Fränkische Schweiz (Franconian Switzerland), traditional foods and local beer.

Here, I must express my deepest appreciation to Robert and Susanne for their arrangements and hospitality for my stay. Herzlichen Dank!

Next day, I moved to Besançon, France to visit the Laboratoire de Physique et Metrologie des Oscillateurs (LPMO), a department of Franche-Comté Electronique, Mécanique, Thermique et Optique - Sciences et Technologies (FEMTO-ST). Prof. Daniel Hauden kindly invited me. I stayed LPMO for three weeks in 1995 and for three months in 1998/1999. At the time, Daniel was a director of LPMO. Formally, LPMO was mainly focused upon oscillators and frequency control units such as SAW, BAW and dielectric resonators, and expanded their activities to the micro-technologies and the near-field microscopy.

On Monday morning, July 16, 2006, Dr. Sylvain Ballandras picked me up at the hotel and took me to
FEMTO-ST. Sylvain directs a research unit specialized on acoustic wave devices for communication and medical applications. In the institute, I gave the following lectures:

1. Coupling-of-Modes (COM) Analysis
2. SiP/SoC Integration of RF SAW/FBAR Filters
3. Basics of RF Filter Design
4. SAW Resonator Design
5. SAW Wireless Sensors

Adding to FEMTO-ST members, Dr. Victor Plessky of GVR Trade SA, appeared from Bevaix, Switzerland. He is also a very active member of our society and well known for his achievement on simulation and design of high-performance SAW filters. Prof. Oliver Wright of Hokkaido University, Japan also attended my lecture. He was with LPMO when I was there in 1998/1999. He is also an active member of our society and working on SAWs, but his interest is directed to the physical acoustics rather than device applications. At noon, Daniel invited us to a nice French restaurant. We enjoyed nice foods and nice French wine with Daniel’s selection. Thanks Daniel and Sylvain!

On Tuesday, July 17, 2006, I moved to Dresden, Germany. Dr. Günter Martin of the Leibniz Institute of Solid State and Materials Research Dresden (IFW) gave me kind invitation to this beautiful city. Günter directs a strong research unit called the surface dynamics group specialized for acoustic wave devices and ferroelectric materials. Günter and his colleague Dr. Hagen Schmidt kindly waited for me at the airport to take me to the hotel.

Next morning, Günter and Hagen took me to the IFW, and Prof. Manfred Weihnacht, former director of the group, Dr. Sergey V. Biryukov and Dr. Vladimir G. Mozhaev were waited for me. Dr. Bert Wall of Vectron International, Inc., also appeared from Berlin. First, Hagen introduced recent research activities in the group, and then I did ours. Following to the introduction, we discussed future research directions on SAW devices.

In the afternoon, we had a sightseeing tour around the old city area. We started the tour from the Baroque style Frauenkirche Church, which was completely crashed just before the end of the World War II and restored last year. Then we walked along the Elbe river and looked around scenic sites: the Semper Opera House, the Procession of Princes, the Royal Palace and the Zwinger Palace. In the evening, Günter invited us to a restaurant called the SchillerGarten, where famous poet Friedrich Schiller commuted in mid-18th century. We enjoyed Saxon traditional foods, beer and Bert’s knowledge: Bert read Schiller’s poem “An die Freude” used in the fourth movement of Beethoven’s Symphony No. 9.

On Thursday, July 19, 2006, I gave two lectures in IFW. First one “SAW wireless sensors” was opened to public and second one “Spurious Responses of SAW devices” was directed to SAW specialists.

In the afternoon, we visited SAW Components Dresden GmbH, founded in 1996. The company gave us brief introduction of the company and showed us its production line in detail. Even though the line is compact, everything is well equipped. I could study quite a lot for latest manufacturing technologies for SAW devices. It
might be interesting for readers that the company offers foundry services for modern SAW devices.

Then we had an excursion to Sachsische Schweiz (Saxon Switzerland) famous for table mountains along the Elbe gorge. First we visited Bastei, and enjoyed late lunch with panorama view from a restaurant on an extremely steep cliff. Then we roamed for a while through the Bastei bridge hopping over pillar-shaped rocks. Finally we visited a fortress Festung Königstein, which was used as a prison where J.F. Böttger, the inventor of Meissen porcelain, was confined by August II the Strong, elector of Saxony in early 18th century.

Next day, I left Dresden and went back to Japan. Hospitality given by IFW people and Bert was excellent. Thanks all!

Finally, I must express my deepest appreciation to all my friends in Europe again. I will be back soon!