

**Newsletter 2003**

Edition No.6

**Dear Readers,  
Dear Friends,  
of the Reinhardt Abraham  
Memorial Foundation,**

In the past year all our essential activities could be accomplished according to our agreed work scope, rendering 2002 a rather „normal“ year for the Foundation.

In the light of the difficult political and economical boundary conditions that have prevailed throughout the year „normality“ is reason enough to be very satisfied and thankful.

We hope that we will be able to pursue our mission in a normal or even better way and to achieve our goals again for the benefit of our RASf students whose enthusiasm and gratitude you will realize reading their experience reports in this Newsletter.

I thank you for your continuous relationship and support!

Dr.Gerwin Dienger  
Chairman of the Board  
Deutsche Lufthansa  
Berlin-Stiftung

## **“We have spring and summer – I think it was a Thursday last year.”**

**By Constanze Kessler and Torsten Reetz**

The beginning of the most exciting 6 months of our life didn't started very well. Our internship was scheduled from the middle of October 2001 to April 2002, but September 11 changed a lot and we knew, it wouldn't be easy. We would like to say thank you to everyone who makes this internship possible even at this time, we are more than grateful.

Finally we arrived at SeaTac-Airport 2 weeks later, but our first impressions of the Seattle-area were nearly the same our friends gave us on the way: low visibility, a lot of clouds and – of course – rain! When Michelle Colby – our very nice and funny Human Resources contact picked us up at the airport and brought us to the hotel. She told us a lot about the things we have to expect and to do within the next few days and by the way that both of us will have a new group to work for. The following days we tried to organize ourselves, to become familiar with the area, and finding an apartment, car, insurance ... to settle down.

While trying to manage all these things we also started to work...

**Conny:**

... on my first day of work Mark Sikrist, my supervisor introduced me to my group – Airplane Performance and Propulsion within BAS (Boeing Airplane Service) – in Issaquah. At that time I did not even have an idea of how to spell it, but soon I learned the importance of this town. Krispy Kreme Doughnuts – yummy. Looking out of my office I could see people waiting three hours and more to get the most delicious taste of a doughnut – and that after the shop was open for six weeks.

After a brief welcome of my co-workers I was already sitting in a meeting with Mark concerning the subject of “Noise Reduction – Chapter III and IV”. I was very amazed about how many acronyms could fit in one sentence. I had the feeling listening to a foreign – not English – language. But being just a few weeks at Boeing I had “learned” this language consisting of acronyms as well. BAS – part of customer support – is responsible for finding answers concerning questions about modifications of airplanes in service. My group consisted of people with different subjects such as propulsion, weight and balance, noise, pneumatics etc. I was able to get a view into different tasks such as the reduction of the noise level of a MD-80, observing how

... I started to work for the Flight Crew Operations Integration's group up in Everett. The mission of this group is to promote and ensure a superior flight deck human interface through development of proper operational and design integration requirements for all interfacing systems. So they are responsible to determine, maintain, and apply flight deck human interface design philosophies. The FCOI group has to ensure that the flight deck and systems on each airplane allow the pilot to operate the airplane safely and efficiently, and of course add flight deck features that continuously improve this from a safety, efficiency or missions standpoint.



**Conny...**

**Torsten:**

a Service Bulletin is developed, getting a look into the drawing system of Boeing airplanes.

My group made me feel very welcome – they gave me a hand in everything and helped wherever they could. They even tried to get furniture for our apartment. Thank you very much.

But since September 11<sup>th</sup> this group had a hard time and its workload wasn't high, because airlines did not have the money to pay for modifications which were not really necessary at this time. Sept. 11<sup>th</sup> also affected the mood of the employees – in the beginning of my time there was every second Thursday a "lay off"-day and suddenly half of the people who worked on the same floor as my group did, were gone.

Since BAS did not have lots of work I asked Mark if I could change groups. Thanks to the help of Mark, Byron (my new supervisor) and Michelle I was able to work the rest of my time at Flight Test – Autopilot Group.

After being introduced to my new co-workers I also met our technical colleague – YD 501. YD 501 is the first 737-900 airplane that was ever built. Alaska Airlines who is the customer offered us YD 501 for more than one year for testing. It was stuffed with test equipment and only a few seats. This 737-900 was also used as a Technology Demonstrator to introduce new developments to customers.



During my first flights I was loaded with so much information and work that I did not realize how fast the time went by and I did not

**Torsten...**

My group is engaged with the realization of alerts within the flight deck. Alerting systems are prevalent in modern flight decks. A Boeing 777, for example, has an EICAS dedicated to generating alerts and status messages about on-board systems, embedded alerting within other on-board systems, stall warnings, and advanced safety systems such as TCAS and GPWS. The fundamental question we had to ask ourselves for all different kinds of alert in the flight deck is: "What do we expect the flight crew to do?" Based on the action the level of alert is defined, whether it is a status messages or a caution or warning. The messages will show up on the EICAS-display some accompanied by an aural and / or light.

But no rule without any exception. As I had to learn the Boeing 737 is not a so-called "EICAS-airplane", so there are some other ways to inform the flight crew about non-normal situations on-board. With more than 2.000 airplane built, the Boeing 737 fleet is the largest commercial fleet in the world and therefore we have to pay attention to it quite a lot.

Part of the FCOI's work is to support airlines. If they got an alert and have problems to find out whether it is correct or not, they send a telex to Boeing's Customer Support to ask us. So we have to find out whether the alert was correct under the conditions they described us or not. The second day I was in my group they gave me such a telex from an airline.

The key in finding an answer is communication. I had to talk to a lot of people in coming to an answer to this and the upcoming questions. What I realized soon was, if you ask two people you will end up with three different opinions. But what I really enjoyed: going to people and talking to them even if they didn't know the answer, but at least they knew a person who might help us. By talking to the people you will get several answers to your questions, my task was, to put all the information and pieces like a puzzle together. That means everyday was different from the others and that is what it made very interesting for me. With this in mind you get a feeling what does it mean to operate an airplane for a pilot and – what is more important – what can you do as the air

**Conny:**

even get a view outside, while we were still in the air.

But after a while all these works went easier – setting up the computer and plotters, writing down notes, talking to the flight deck, pushing all the different buttons, getting information from the plot and enjoy the flights – and even being able to find the time for my lunch box.

One of my flights went to Salt Lake City where I could “spy out” the landscape – because one of my private trips brought Torsten and me to Utah.

### **One thing we did during our time with Boeing, was to fly to the Olympic Games at Salt Lake City.....**



### **Torsten:**

plane manufacturer to realize it as simple as possible and as efficient as possible.

If you talk to people you will always get some more. They are always interested in you as person and as a German student. Of course, one of the sentences I've heard often was: "Oh from Germany? I have German relatives!"

They asked and knew a lot about Germany not only because of the Olympic Games in Salt Lake City. So you always had a very interesting talk about your questions and ourselves. They gave me some good advice what we (Conny and me) should visit, see, and do within the Seattle and Washington area. Even if we couldn't do everything of it – unfortunately, all of them were worthwhile!

It was the evening of the opening ceremonies and they closed the airport for this time, so our flight was delayed a little bit. The airport was crowded with people. We recognized the increased safety and the nervousness of the officials but we also could see and realize the excitement and happiness of the people and of us. Everything was well organized. The next day we stood together with 16.000 people watching ski jumping in the morning.

Our next event was the ice hockey game Germany vs. Slovakia – and what shall we say – our team won the game.

The weekend in Salt Lake City was incredible seeing all these people from all the different states of the world cheering and being happy all together without meaning harm. The City was alive at day and night.

But soon we were back in Seattle

### **Conny....**

Another marvelous thing at work was to sit on an observer seat in the flight deck – by the way:

the flight deck is very small in a 737 and 4 people had to fit in it during testing.

But sitting in airplanes was not the only work I had to do. Before a test can start we have to get an "order" to prepare the test – which is called an EWA. After calling people to find out what really shall be tested on the autopilot system a Tip Sheet has to be written – which explains the test in ever specific part – such as which buttons you have to push at what height and speed. But the most troublesome work was papers, which had to be written for the FAA. After I finished such a paper 3 other people had to sign it. Everytime one of them had to sign it I got it back to make some changes. But nevertheless, at one point I finally got them "perfectly" done.

But after the flying part of the flight test work was done our job was not done. Now we had to analyze all the recorded data.

Within the 4 months I worked at Flight Test I was able to perform tests on every airplane model.

This work was just like a dream to me. Thinking about my job after I will have finished my studies, I was always dreaming of a job that wouldn't make me sit at a desk and stare at a screen all day. The work at Flight Test was perfect for me. I was sitting at my desk writing sheets, reports etc. but once in a while I was allowed to change my desk with the computer systems on board.

There is so much more we could tell about our stay in America, but unfortunately there is not the space to do so. That's why we just want to tell some short stories that also made our stay unforgettable:

- sometimes you will be asked in a supermarket for an ID, but don't think your German Passport is good enough, after we showed it to the cashier: "Do you have a better ID?";
- don't go to early to the movie. Being 15 minutes prior to the start we already saw the last 5 minutes of the prior performance;
- Leavenworth: How Americans think Germany looks like, women dressed up in "Dirndl's" and men in leather pants dancing around a "May-tree" and always a brass-band playing;
- Flying with Southwest Airlines is always fun! "If you are travelling with a child or someone that acts like one, please secure your oxygen mask first...", "It was a pressure – (pause) pleasure having you on board."; "If you are travelling with kids – we are sorry – secure your mask first, then help your husband and then..." , and sometimes they welcome you at the airport with a song.
- If you go for a whale-watching trip, make sure that somebody else already saw whales at the same day!

### **Torsten....**

Full throttle, parking brakes released, hold a little bit of backpressure, more rudder and pull to rotate. This was not the beginning of a flight test, no it was my first flight as a pilot. I took off with my little Cessna 150 from Paine Field Airport in Everett. Flying an airplane is one of the best experiences I've ever made. And of course you see and realize things from a different perspective, there is only the airplane, you and the wind. One day I flew with the little Cessna, six feet to my right wing two eagles were fighting each other in the air, I couldn't believe it! But the next time I flew it wasn't an eagle but a Boeing 777. So if you go flying you should watch carefully.

Back to work I've got a big task which I was working on for the rest of my time with Boeing. The task was to define the requirements for a possible hijacking alert and its procedure. As you can imagine it was and it is a very sensitive subject but I had very good discussions. Sometimes it was hard to get a hold of people I had to ask.

After all what I have learned within the most exciting six months of my life so far is: 1. Talking with two people ends with three meanings. 2. You can rarely finish a task. In most cases you will finish them for a while only. 3. Sometimes there is no clearly defined answer. Or to speak with my lead's words: "If you think there is an easy answer, you don't understand the question." Within the six months this statement appeared to me very often.

- Besides acronyms (BTW this is FYI, CU ASAP) you will also experience new meanings of words – such as SUN BREAK (if you see the sun blinking through the clouds, and that is real);
- One sentence we had a lot of times: “You should be here in summer.” and furthermore “We have spring and summer – I think the last one was a Thursday last year.”



Last but not least, we want to say THANK YOU to everyone who made / makes this internship possible – people in America as well as in Germany, who gave us a big hand in preparing and during our stay. Especially thanks to Ron Bengelink at Boeing, Marianne Reichow from Germany and Michelle Colby at Boeing. Furthermore we would like to thank all the people we worked with.

We hope that this opportunity for German students to take a look into The Boeing Company will stay alive and also grow – that a lot more students get the chance

## One Semester at the University of Washington

by Robert Seguin

I had my suitcases packed, my tickets in my hand and all the paperwork that needed to be done behind me. My flight was meant to leave Berlin on Sep 13<sup>th</sup> 2001. I was off to a smooth start to my semester long adventure in Seattle at the University of Washington, but some things cannot be foreseen. The incidents of Sep 11<sup>th</sup> rendered part of my preparations futile. After the terrorist attack on the World Trade Center in New York the North American airspace was closed down for several days and among the canceled flights was the one that was supposed to carry me to Seattle. For a quick moment I was not sure whether my adventure was over before it had started. After long hours on the phone and thanks to Marianne's organizing efforts I discovered that my arrival in Seattle would be delayed for eight days. I was happy that I still had the possibility to go but at the same time I knew that the first weeks were going to be hectic since I had planned to use that first week to get settled. I arrived in Seattle on Sep 21<sup>st</sup>.

Orientation sessions at the university had already started and everything needed to be done yesterday rather than today. The search for an apartment turned out to be har-

der than I thought because most of the places were rented out to students who had arrived earlier than me. Luckily I found a nice house to live in together with five American roommates. Most of the furniture I needed I bought at garage sales. It takes some time and somebody with a car to drive around, but I did get a few great deals. After about two weeks I was finally settled and had all the paperwork done. It was time to start the fun part of my stay.

I wanted to get a broad overview of the things that were going on at the University of Washington. Hence I did not limit myself to take classes in the physics department, my own major, but decided to also take peeks into other fields of science. The classes I registered for in autumn quarter were *Laser Physics*, *Continuum Mechanics for Geophysicists*, *Water in Environment*, a class for atmospheric scientists, and a *condensed matter* seminar. But I was not quite satisfied yet. Attending lectures and doing homework sounded all too familiar to what I was used to. And after all, this semester was supposed to be something special. I started to look around for interesting projects.





I did not have to look for long. After less than a week I had the possibility to work in three different labs on interesting subjects. I decided to take a shot at atmospheric sciences. The group I worked with for the rest of my stay tried to unfold the mysteries of freezing of water droplets. If small enough droplets are generated they can be super-cooled to temperatures of about  $-37\text{ }^{\circ}\text{C}$  before they freeze. Interestingly different bacteria strains or amino-acids can have a big effect on the freezing temperature, both lowering and raising it significantly depending on the particular strain. In cooperation with the department of oceanography that supplied us with deep-sea bacteria samples we examined their effects on the freezing of water. In the second quarter I went back to my roots and took *Solid State Theory*, *Statistical Mechanics* and *Defects in Materials* while continuing to work in the lab. Surprising for me was the hospitality of my professors. I received invitations to Thanksgiving dinners as well as Christmas and farewell dinners. This shows the very intimate atmosphere I worked in. The University of Washington has a very nice and very green campus. On the rare sunny days it was easy to find a piece of grass to slow down and relax on.



Of course my life did not only take place in the lecture halls and well-equipped labs of

the University of Washington. Seattle is a city that has a lot to offer. The birthplace of *Starbucks* and *Seattle's Best Coffee* has many coffee houses in which I could soothe my yearning for European cafes. Downtown Seattle is unusually clean and entices with attractions like the Space Needle, a leftover from the 1962 EXPO, Pike Place Market or the Experimental Music Project (EMP). At the university the organization FIUTS (Foundation for International Understanding through Students) offers a number of activities and events for international students and interested Americans. Every Wednesday they offer a free lunch, a great opportunity to meet interesting people and plan the weekends. For those who want to get out of the city they also offer trips to Seattle's attractive surroundings. The orientation camp that takes place every fall is a definite must for newcomers. I also enjoyed trips to the San Juan Islands and to Mt. Rainier.

The Intramural Activities Center (IMA) is simply great. This university-owned gymnasium offers a variety of sports to students, staff and faculty members. Equipment can be checked out free of charge and partners for all kinds of different sports are easy to find. I went down there up to five times a week, enjoying fitness training, badminton, basketball and swimming. Here I managed to compensate for the mental challenges at the university with physical activities and it also helped me through the sometimes gloomy winter days in Seattle.

The closer the end of my stay came, the faster the time seemed to fly by. So many new friends I wanted to see for a last time, so many plans to visit them in their various home countries and so many things I always wanted to do in Seattle but simply never found the time before. It was a great experience and I would like to thank all the people that made this stay so enjoyable for me with their flexibility and friendliness. *Marianne Reichow*, *Peter Struck* and *Dr. Gerwin Dienger* from RASf, *Jutta Gbur* and *Prof. Jürgen Sahm* from the TU Berlin as well as *Dr. Brian Swanson* from the University of Washington.

**Coming to Berlin**

**by Brien Lindstrom**

visiting student to the TU-Berlin

I found out in mid-February that I was going to Berlin through the RASf Student Exchange; I was so excited that I started telling everyone I knew. I tried calling my family, but no one was answering their phones, all I could do was leave messages. I went and talked to a few of my professors, and they were actually more excited than I was; now that's hard to imagine. I started to plan out what needed to be done in the next few weeks before I left; there was a lot to do in a short amount of time.

I arrived in Berlin on April 5<sup>th</sup>, and my exchange buddy in Berlin, Christian Berning, along with Kristian Käpernick and Connie Henning, met me at the airport in Berlin. They brought me to the ISB, and then they gave me lunch and a four-hour walking tour of Berlin. I got back to my room and slept.



View of Berlin from the top of the Französischer Dom

**Internationales Studienzentrum Berlin**

The ISB is located in the western part of Charlottenburg, right on one of the U-Bahn lines; it's a short trip to the central part of the city, to the TU main campus, and to the Grünewald. Frau Fritche and Frau Ebel, the directors of the ISB, are nice and very helpful. The ISB is great; my room was one of the larger rooms in the building, with plenty of space. The computer room is very useful in checking email or the score of the last University of Washington Football game. The common rooms on each floor made it easy to talk with other people and make friends. The rooftop terrace was great; we grilled and had parties during the summer.

The ISB had weekly cultural activities, such as residents giving lectures about their homelands; this gave us a great opportunity to get to know our neighbors. Plus there are excursions planned by the ISB to various neighboring cities and countries.



This was quite possibly the largest schnitzel in Berlin, if not the world.

Final score: Brien 2, Schnitzel 0.

With some of the other residents of the ISB, we faithfully watched the World Cup and Tour de France, had a huge 4<sup>th</sup> of July party, and found an amazing Schnitzel place.

**Technische Universität Berlin**

The TU has a great International Exchange Office, run by Jutta Gbur. They organized a very useful orientation day that laid out what we needed to take care of all of the related student exchange paperwork. We had a weekly Stammtisch, so we could meet and talk about anything from concerns to which club we were going to on the weekend. Some of us started playing in a weekly soccer match; some of those Europeans can play football!

The TU worked out great for me; they have a huge Civil Engineering over in the Wedding section of Berlin. My classes were challenging, all of the technical German vocabulary gave me a chance to get quite familiar with my dictionary over the first couple of weeks of classes. The scariest part was taking oral exams; back in at the UW, all of our exams are written, so I had no idea what to expect.

My classes were usually over by mid-afternoon, so always I brought a map of Berlin with me, after class I would open up the map and think, "What haven't I been yet," and decide what part of Berlin or what museum to see that afternoon.

### Travels

During the school term, I took a few trips; the first was with the ISB to Poland. We spent five days traveling through Breslau and Krakow, both were amazing cities and Polish food is wonderful.

I also traveled back to Seattle for a little more than a week in mid-June to be a groomsman in my sister's wedding. The wedding and reception went well, and I spent a good portion of the reception time telling most of the 250 guests about my studies and what it is like to live Berlin.

Once my courses were completed, I took a road trip with some of the other residents of the ISB and two of my friends visiting from Seattle to the Czech Republic; we saw a great little town called Cesky Krumlov and of course, Prague. We managed to beat the floods by about two weeks.



The town of Cesky Krumlov

Later, I spent some time traveling around Southern Europe, seeing first hand what I would be studying in a supplementary architectural class that I will be taking when I return to Seattle. What an amazing time.

### Impressions of Berlin

Looking back at the last six months that I have spent in Berlin, I had an amazing time, but last six months has gone by way too

fast. Berlin is a great city to live in; there is always something interesting to do when you're not studying. I would suggest to everyone who is thinking about taking part in this exchange, "Do it, do it, do it."

I would like to thank Fatih Dogan and David Fenner at UW, Jutta Gbur at the TU-Berlin, Dr. Gerwin Dienger, Peter Struck, and Marianne Reichow with Lufthansa, who all have helped me during my exchange.

Memories of my classes and the places I visited may fade over time, but I will always remember the friends I made through the RASf and those at the ISB.

### A Boy of the Summer

by Martin Otzik

Let's take a short trip back in time and think about the fall of 2001. The attacks of 9/11/01 changed the world, the Yankees lost a World series, the Reinhard Abraham Memorial Foundation and the Boeing Company conducted interviews for the 2002 trainee program. When I learned that I was selected to participate in the program two things came to my mind. First "What a great chance to work for Boeing" and secondly "I will be in Seattle in the summer. When do the Mariners play?". Since my first vacation in the USA I am in love with one of the few true American traditions, baseball. So why don't you join me on my journey through the baseball season in the summer of 2002.

### Call to the Major League

In late October 2001 I had my two interviews, one with Heiner Wilkens and the other one with Chris Morgan. Shortly after the interviews I left for a vacation to the western US with mixed feelings. It wasn't until I stopped at a Kinko's copy shop in Las Vegas, where I checked my emails, that I got the call from Marianne Reichow. I could hardly believe it. I hit a home run. Me, Martin Otzik, would get the chance to play in the big league, work for The Boeing Company, learn how airplanes are built and see them put together in the factories. Finally I was in the league and eager to join the game.

## Spring Training

Every baseball season begins with spring training in the sunny and warm weather of Florida or Arizona. The team members get to know each other and work out. The coaching staff prepares strategies and tactics and does other preliminary work to ensure a successful season.

My "spring training" took place in Berlin where the weather wasn't warm and sunny at all. Even though I didn't work out physically, there was a special kind of work out, the paperwork-out. Before I could even think about getting to Seattle I completed forms from numerous organizations. INS, AIPT, Boeing HR, Boeing Medical and DHL just to name a few of them. After I had hacked my way through that thicket I could finally board the Airbus 340 (coincidence?!?) which brought me to Vancouver in British Columbia. Riding one of the famous Boeing vans I entered the United States at Blaine, WA.

The first week in the Puget Sound area was filled with activities like looking for an apartment, finding an acceptable mode of transportation and all the other small items necessary for a comfortable stay. During this time I teamed up with another player from Berlin. Cornelia joined the trainee program a year before, but an injury postponed her engagement. It turned out that we would share an apartment for the following six months.

## The First Game

The first game of every season is a very special one. Finally the players can show their talents and skills in the public. Unique is the first game playing for a new team in a new arena. Seattle's baseball team, the Mariners, plays at Safeco Field, a great new ballpark with a beautiful view of downtown Seattle.

My arena would be RM&T Engineering in the Everett plant. What is RM&T you ask, so did I when I arrived in the 40-84 building. I was ready to roll. "Let's play ball!"

## Home Games

Home games are a nice experience when you are winning, and could be cruel when

you are losing depending on the fans' expectations. Baseball fans in Seattle had been spoiled the season before with record breaking 116 wins. So the expectations were very high, which I could witness on my several trips to the ballpark.

Joining the Boeing team I didn't really know what to expect from RM&T. I could easily translate Reliability, Maintainability and Testability but this didn't help much. But during the first couple of weeks I learned what reliability means in the aviation industry. It's a lot of math, precisely probabilistic and statistics.

Another important part is data collection and analysis about almost every component of an airplane. My different projects gave me an excellent insight into different aspects of the work there. Furthermore I was really surprised about the working environment. On the positive side I have to mention helpful coworkers, the great team spirit among the Boeing family as well as excellent guidance and help through my lead and my manager. A building with hardly any windows, gray cubicles and carpets desperately in need for a shampoo treatment were noted on the not-so-positive side.

Two very special "home games" can't be missed here. One was the RM&T Futures Conference where the whole department came together and talked about the future of RM&T within the company and the processes inside the department.

The other big event was the roll-out ceremony for the Boeing 747-400 ER (or 910K). To witness a new type of airplane leaving the factory building was a memorable moment for me (Actually she was pulled into the building, but who cares!).

## All Star Break

In the middle of every baseball season the All Star Game takes place, where the best players of the American League play against those of the National League. This year's game ended in a tie, which you usually wouldn't find in baseball. Despite the strange outcome this year, the All Star Game is a large party with different festivities.

My first summer festivity was the fourth of July. I didn't know what to expect, since this was the first Independence Day after the attacks of 9-11. Would I encounter tremendous amount of patriotism, American natio-

nalism or worse? No, not at all! I spent my Independence Day in a park having a nice barbecue with a couple of summer interns and lots of fun. In the evening I watched great fireworks at the waterfront of downtown Seattle - as American as it gets.

I won't forget the other barbecues either, one with the whole RM&T department in the same park where I spent July, 4<sup>th</sup>. Another one with my work group at my lead's house which was great as well, although I think the egg toss was "kinda silly".

### Road Games

Professional baseball players spend half of the season on the road. I took several road trips myself. The Pacific Northwest is a beautiful area with nature and culture in almost all varieties. From the rainforest on the Olympic Peninsula in the West to the beautiful cities of Vancouver and Victoria in the North; from Grand Coulee Dam and Spokane in Eastern Washington to the Columbia River Gorge and Mount St. Helens in the South there is much to discover and experience. Most of my weekends I spent traveling around joined by my friends and family who came visiting from Germany.

Which road games would I say stick out? I can't really say. I liked the whitewater rafting tour on the Wenatchee and the flight in a Cessna 152 over the San Juan Islands. However, the trips to San Francisco and LA, especially the roller coasters of Six Flags Magic Mountain, were remarkable, too. Another trip took me to the Abbotsford air show where I saw the Snowbirds and Thunderbirds perform their precision flights as well as a flyby of a B2 bomber.

### Post Season

Every baseball team competes the whole season of 162 games just to get into the post season. Unfortunately the Seattle Mariners finished only third in a very strong division behind the A's and the Angels and their season was over. Let's recapitulate this season. The Mariners won 93 and lost 69 games, my personal record for my 18 trips to Safeco field is 11-7, and an invaluable amount of fun, excitement and entertainment.

My last day with Boeing arrived much sooner than I expected but the last week turned out to be a very special one. My farewell

lunch on Tuesday with the colleagues in the 40-84 building gave me a lasting impression (and some nice presents), the official lunch on Wednesday with Michelle Colby, Allan Bailey, Ron Bengelink and Wayne Kragt was excellent, and on Friday I got a special treat at Azteca.

Then my time as a global trainee was over, and I took a little vacation since Christian and Kristian (the next guys in the program) wouldn't be in Seattle till the following Friday. So I jumped on a flight and spent the week on Maui, where it rained almost all the time. Great, sunshine in Seattle and rain on Hawaii, what a strange world, but I enjoyed every second of it. When I finally left Seattle for good another week later I made a stopover at Lake Michigan in the little town of Chicago, where I got a last glance at The Boeing Company, the world headquarters (didn't see Phil, though).

### The Fall Classic

The 2002 World Series featured two surprising teams, the San Francisco Giants and the Anaheim Angels, who had beaten the Yankees. My favorite team the Diamondbacks lost earlier in the post season and the Mariners didn't even reach the playoffs. The world series went all the way to game seven, where the Angels won for the first time in history. Baseball fans in southern California will always remember the 2002 season.

What about myself? I will always remember my season in the Big League, working with Boeing was an experience which I can hardly put in words. I learned so much about aircraft reliability, The Boeing Company and the aviation industry, I made new friends and watched a lot of baseball, all of which I already missed in the Lufthansa 747 high above the Atlantic Ocean.

However back in Germany the Bundesliga soccer season has already started...



from left to right:  
Wayne Kragt, Martin Otzik, Ron Bengelink,  
Allen Bailey

## The beginning is always the hardest part

by Sebastian Stolle

The first four days were quite adventurous. Since the busses to Seattle do not leave Vancouver every hour I had no other choice but to stay in one of Vancouver's Backpacker hostels for the first night. This was actually quite nice especially since the hostel was located right across the street from the Greyhound bus terminal, which reduced the distance I had to carry my luggage to a minimum. Unfortunately, the reservation for a bed in the Seattle Youth Hostel hadn't worked for some reason, so I just went there to try my luck and eventually ended up in a 10 bed dorm. At this time I had no idea about Seattle's public transportation and the walking directions from the hostel's webpage had told me to walk 3 blocks in one direction, turn left, and walk another 3 blocks, but it seems that there is no real definition for how far one block is. Anyway, I decided to walk which was sort of a mistake, because the walk from the corner of 9<sup>th</sup> Avenue and Stewart Street to 84 Union Street proved not to be an easy task, especially since Seattle has at least as many steep hills as San Francisco.

I paid for two nights in advance which turned out to be a very good estimation. On the day of my arrival (Saturday) I met with Brien, the American exchange student that

had just returned from Berlin. He showed me most of the UW campus, especially the room with all the ads for renting inquiries. This is very useful for people that are new to the area. I spent all Sunday calling people and making viewing appointments, and after looking at a really bad but still expensive room I finally moved into my new home on Monday morning, 8.30 a.m. This one is not only affordable, but also very close to the campus and quite tidy. The timing was very good as well, because I just made it back to the hostel at the right time in order to check out and get all my luggage. From the moment I finally dropped my stuff in the room that I could stay in I began to feel much better. It's always a good feeling to know where your home is.



This photo was taken by Brien Lindstrom „YES, THEY ARE HERE IN SEATTLE“ !  
(from left to right: Christian Berning, Martin Stolle, Kristian Kaepernick)

During the first week at the UW I had to deal with the university's admission procedures, which tried to give me a hard time, but didn't really stand a chance. It's quite surprising how much new international students are expected to know about who to see and which forms to fill out, but I guess it's not much different for exchange students in Berlin. After some time of running across campus and getting another measles vaccination I was registered for classes, had met my research supervisor at the AA Department and even knew my research topic already.

So I finally got over the first stress. Being new to a place like Seattle is probably always a little tiring at first, but now that I have lived in the University District for more than

7 weeks I have met a lot of people, went to concerts and sports events, and life is treating me very nicely at the moment. Even the infamous bad weather in Seattle has been very merciful so far. Everybody has told me that this year's fall is one of the nicest in years. I'm doing quite well with my work, although I get stuck from time to time, which is probably normal for research. It's very convenient that I can go to my lab whenever I want during day and night, especially when I have a bright idea that calls for prompt action. The work-out opportunities for UW students are absolutely breathtaking. There is basically nothing that can't be done, which provides a very nice change after hours of just sitting down and thinking about equations.

Finally I have to say that even though I managed to get myself used to my new life, I would have had a very hard time without one particularly nice person. Thank you very much, Brien!



## Trainee Program at Boeing, Seattle

By Kerstin Held

### My Arrival in Seattle

Having heard so many good things about this Trainee Program, my expectations were high.

I arrived in Seattle in August and was picked up at Seatac Airport by Michelle Colby, the responsible Human Resources Manager and Petra Determann, who was

just about to finish her Boeing internship at that time.



The first week I already got the Seattle experience: It was grey and wet for a whole week! But when it finally cleared up I could see the full beauty of the area: the Olympic Mountains to the West, the Cascade Mountains to the East, Mount Rainier to the South and plenty of waterways and lakes everywhere. Seattle has a beautiful setting being surrounded by mountains, and the sound and little lakes are offering lots of outdoor activities.

### My work at Boeing

I was working at Flight Test located at Boeing Field just south of Seattle.

I was lucky to get an insight into two areas of Flight Test that were different but depending closely on each other: Flight Test Instrumentation and Flight Test Engineering.

In both groups, I felt welcome and integrated from the first day on. Everybody was overwhelmingly nice and very helpful whenever I had a problem.

During my time in the instrumentation group I was working on two projects:

My first project was to update and optimise a database for pressure transducers. This turned out to be lot of paperwork. I had to get all the necessary folders of various kinds of transducers from different brands together and organize the huge amount of data in the database in such a way that made it easily accessible and concise to whoever needed a certain kind of transducer for a test.

The second project was a fuel flow meter assembly, for which I prepared the acceptance test plan for the later evaluation of the system. This included visual inspection, calibration tests to ensure that each article complies with the specified performance criteria, and functional tests in which the article was exposed to a certain pressure, vibration and shock.

During my time at Flight Test Engineering, I was working in the Automatic Flight Control and Sensors group. We were a very international group consisting of 8 people from 6 different countries. My work consisted mainly of writing test plans for new airplane systems, testing the actual systems on Ground or Flight Tests, running data and writing test reports and summaries. Thus, I got in touch with a big range of different airplane systems.

While conducting the tests, I learnt to operate the data recording and monitoring systems that were built in specifically modified test airplanes, and got familiar with the following processing of the gathered data with data evaluation software tools on the ground. Throughout my stay in the Autoflight group, I completed tests of low range radio altimeters, multimode receivers and various other cockpit systems, at the beginning with the help from my co-workers, and at the end all by myself. Furthermore, I took part in the evaluation of Autoland systems on a Boeing 737, which had to be tested using a variety of different landing procedures, airplane configurations and wind conditions.

Especially I enjoyed organizing the tests and communicating closely with the wide range of different people involved in the whole process, that are necessary to make the tests successful.

I was very positively surprised and honored by how much trust was put in me. The big responsibility I was given highly motivated me and is just one example reflecting the great teamwork and exceptional working climate I experienced during my internship with Boeing.



### Living in Seattle

But there is more about Seattle than just being home of one of the biggest and most powerful aerospace companies of the world. There is a lot to explore in the city itself and its surroundings.

During the day it is just nice to stroll along the waterfront at *Alki Beach* in West Seattle, go rollerblading around *Greenlake* which is located in the same-called district, go shopping for fresh seafood and other little things at *Pike Place Market* or just pass the time in all those little cafes, restaurants and little shops on *Capitol Hill* just to give a few examples of the endless possibilities.

Other things to see are of course the *Space Needle* for which Seattle is famous and which was built for the 1962 World's Fair that Seattle hosted, museums like the *Seattle Art Museum* or the *EMP* (Experience Music Project) which is a modern-style interactive music museum located right beside the Space Needle in Downtown Seattle. I can also highly recommend the Seattle Underground Tour leaving from *Doc Maynard's* (which is a bar with Live Music at night and a starting point for the tour during the day) on Pioneer Square. The Underground Tour is usually a magnet for a lot of tourists, but is very informative and gives a good overview about Seattle's unique history.

Nightlife mainly consists of countless bars with Live Music almost anywhere you go. The *Stranger* or *Seattle Weekly* can be picked up at several different places for free and give information about everything that is going on.



### The Seattle Surroundings

When the weather is nice, one has the feeling that the whole Seattle population is outside, especially at the weekends.

I had a lot of fun exploring the outdoors of Seattle's surroundings and tried to see as much as possible during the short amount of time I had (unfortunately only 4 1/2 months). *Mount Rainier* and the *Olympic National Park* offer beautiful hikes, especially in the warmer months. It is also nice to take the ferry from Anacortes to the *San Juan Islands* and to go kayaking or just relaxing depending on what you are into. Since *Vancouver* is an amazing city and only about 4 hours away by car, it makes a great weekend trip, too.



When winter started, I took advantage of the various skiing areas east of Seattle and headed out to go snowboarding at one of the close-by places, like *Snoqualmie Pass* (1.5 hrs), *Stevens Pass* and *Crystal Mountain* (both about 2.5 hrs).

### Thank you all

Finally, I have to say that my expectations were not only fulfilled but even surpassed. I would like to thank everybody involved in this great program, from the Reinhardt Abraham Memorial Foundation's side as well as from the Boeing side, that made this a great experience for me I will always remember.

Hopefully, the September 11<sup>th</sup> attacks will not negatively affect this exceptional program, so that there will be many more students getting the opportunity to take part in this in the future.

### An eight months traineeship with The Boeing Commercial Airplane Group, Seattle

By Cornelia Henning

#### Meeting in Hamburg

The Reinhardt Abraham Memorial Foundation (RASf) and the Deutsche Lufthansa Berlin Stiftung (DLBS) invited some other students, who were also enable to join this Program and me to a meeting to Lufthansa Technik in Hamburg. There we met Dr. Gerwin Dienger, Peter Struck, Marianne Reichow, Jutta Gbur and Frank W. Jacob.

It was an amazing and a great day. After a warm welcome we got information about RASf and DLBS. Frank W. Jacob lead us through the hangars where Airplanes from Airbus Industries and The Boeing Company shown in maintenance. I love it to be in aviation factories. We were also lead to the Junkers Ju 52. As I saw the Ju 52 I recognized the engines because sometimes this airplane you can see and hear at the heaven above Berlin. The DLBS has a Historical Fleet contains the JU 52, Messerschmitt Me 108 and Dornier Do 27.

Later in the afternoon the Tickets to Seattle were given to us. I looked to my Ticket and I still could not believe it. I thought that we will fulfil well the tasks which were waiting for us at The Boeing Company and The Student Exchange Program as well as meet its expectations.

#### Arrival in Seattle

In April 2002 Martin Otzik, a fellow –student, and I flew with the Deutsche Lufthansa from Berlin via Frankfurt am Main to Vancouver. From the Airport a bus shuttle of The Boeing Company brought us to a Holiday Inn Hotel in Everett, where we stayed for two weeks. We searched for cars and apartments and began to work with The Boeing Company.

### Traineeship with The Boeing Company

I joined Boeing Commercial Airplane Performance and Propulsion Group in the area Weight Engineering in the summer of 2002 in Everett. Originally, my stay there would have ended in October 2002, but they mutually agreed I should stay with their great team and help out until the end of the year. I was very happy again!

Since I arrived I was completely involved in all the activities associated with Weight Engineering support of the 747, 767 and 777 Platforms.

My duties have included to participate in the design-build process for the 747-400ER, the 777-300ER and the sustaining programs for all three Platforms. I practiced weight control skills for the structural Components of the 747-400ER and the 777-300ER.

I also took part in actual weight verification for components of the 747-400ER and 777-300ER. For example I was responsible for verifying the weight of the 777-300ER centre section. I used also CATIA training to calculate the weights and to read drawings.



During the many trips with one of my lead engineers Dave G. Wallace I saw the parts used in the section and discovered how all

of them fit together. Finally, when the first articles arrived from the vendor in Japan, I was there to witness the actual weighing.



I was also able to take several classes to improve my engineering skills. I have taken extensive CATIA Training, Oracle database training and customized spreadsheet training.

I also worked in the 777 Configuration Control Group within Weight Engineering where my primary responsibilities included assisting in the preparation of the monthly status reports for the 777-200, -300 and -300ER Programs and developing the revised Specification weight for the 767.

My supervisor Michael B. Bowman gave me also the opportunity to take the summer intern class 2002. The class is intended to provide interns with a comprehensive to get a broader perspective than usual on our daily work and to have a good overview on The Boeing Company. In addition, the class helps the interns to discover how the different groups and disciplines work together at Boeing, for example Commercial Airplanes, Space and Communications, Computing, Customer Support and Manufacturing. We did also group exercises to reinforce the topics presented in each session. We also built small gliders in groups.

I also participated in several process improvement activities that are intended to improve the efficiency and effectiveness of the process. I attended Weight Engineering

staff meetings and participated in discussions on the day-to-day issues and tasks.

I feel this program very valuable as my fellow workers shared information and ideas with me that strengthen my knowledge of how the commercial aircraft is designed and built.

I also assisted Boeing Engineers (Paul A. Ruskowsky, John De Rosia) during the teaching program "A World in Motion". This program is designed to teach elementary students about science and engineering.

### **Flying, Soaring, Travelling**

With some American, Japanese, Russian and French friends I visited San Francisco, Ocean Shore(Washington Coast), Seaside (Oregon), Orcas Islands, Vancouver Islands, Columbia River, Cascades, I did Wild Water Rafting on Wenatchee River, hiking on Mount Rainier. We went sometimes to Lake Washington to go fishing salmon or to go fishing brass on Fidalgo Island or crab catching close to Mukilteo in Puget Sound Area.

With my German friend Carl, I flew on 4<sup>th</sup> of July in his Cessna –337 Skymaster from Arlington, WA to Los Angeles,CA in about 9 hours along the West Coast of the USA above the Pacific Ocean.



We were given permission to fly over Los Angeles International Airport in altitude 3500ft. Extraordinary!



Then we flew back in the Cessna –172 from L.A. Airport over the Sierra Nevada, Oregon(Crater Lake, Mount Hood), Washington(Mount St. Hellens, Mount Rainier) back to Arlington, WA in about 12 hours within 2 days.

We also flew with the Cessna –337 along the Cascades over San Juan Islands. Another Flight was to Mount Baker. This is an active volcano.

I met a friend at Arlington Airport who took me in his Stemme S10 over Arlington Area. It is really a great motor glider.

I visited with Kevin D. Finke The Boeing Employee Soaring Club in Arlington, because in Germany my hobby is soaring. Finally, I visited Aviation Ground School in Paine Field and with The Boeing Company taught by Oscar Naimi.

### **Other activities besides Boeing**

During my studies in Aerospace Engineering at the TU-Berlin I worked as a student research assistant. I met my former chief Prof. Dr. Petra Fromme in Phoenix, Arizona, at the ASU (Arizona State University). We wrote the paper "Crystallization of Membrane protein under Microgravity". After that I flew to Houston, Texas, and gave an oral presentation about this paper at the 53<sup>rd</sup> International Astronautical Congress in Houston, October 2002.

In January 2003 I flew to Melbourne, Florida, close to Cape Canaveral where I met my former chief again at the Florida Institute of Technology. We prepared the Advanced Protein Crystallization Facility Chambers from Astrium for the STS-107 Space Shuttle Mission (Space Research). The APCF-Chambers are one of the 6 ESA (European Space Agency) payloads as multi-user facilities for the study of human physiology, biology and fluid physics.



To see the launch of the orbiter Columbia from The Kennedy Space Centre in January 16<sup>th</sup> 2003 life in Florida was an absolutely great event. I saw the orbiter until it disappeared in the heaven and I did not imagine that the astronauts would never come back alive. Unfortunately, Columbia and crew , the experimental results lost during entry shortly before landing Feb 1<sup>st</sup> 2003. I am very sad about that accident.

### Departure from USA

In January 2003 I flew back from Melbourne, Florida via Atlanta, Virginia and Paris to Berlin.

### Thank you very much - DANKESCHOEN !

It was a great Experience to work with The Boeing Company as a team member and to work together with friendly and helpful people and to be in such a nice location like the Puget Sound Area.

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Dankeschoen to all the people who also helped me and were also nice to me and are not mentioned here.

Thanks to the people of the Boeing Company I met. I had a wonderful time with you! Thank you that the people from the Deutsche Lufthansa Berlin Stiftung and from the Technical University of Berlin enable that great experience! I will never forget!

### Odds & Ends

Dear Friends,  
sometimes it's not as easy as it seems to keep all my records regarding your addresses, phone numbers, email addresses etc. most up to date while you are scattered to the four winds. Please help me to keep this file and our contact alive!

Thank you and all best wishes to all of you!

Marianne Reichow

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