

Newsletter 2002

Edition No.5

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

2001 is behind us – what a dramatic year for the entire mankind. The horror scene of September 11, will for ever remain in our memory and in the world's history books.

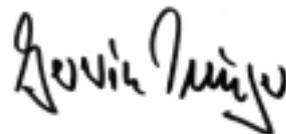
We active members of the international aviation community – sharing enthusiasm and determination towards further development of aviation - were deeply affected, none of us had ever anticipated such a perverse criminal use of civil air transport.

Our industry's economical situation is dramatic, massive lay-offs are the painful implication, the doors closed for our students having successfully completed their education and ready to join the aviation community.

However, even this severe crisis will be overcome, our industry will recover and our new talents will be heavily needed.

This obviously was also Boeing's vision when they decided to keep the RASf program going and selected again four RASf students as Trainees in 2002. This is not at all a matter of course and I would like to extend my high appreciation and thanks to Boeing – particularly on behalf of our current and our future RASf students.

May the new year 2002 bring us peace and new chances to build our future in a cooperative spirit all over the world!



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

Student Exchange Programm (SEP) I

Luckily it ain't over yet!

...at the University of Washington as a visiting graduate student.

By Lars Gutschmidt.

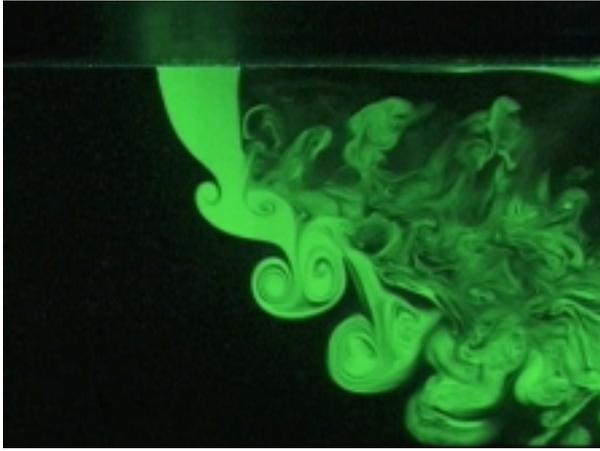
Today is September the 9th and it has been almost six months since I arrived in Seattle. Of course I still remember that first day. We left Berlin, -1 °C and snowing, and eighteen hours later we landed in Seattle, 17°C and sunshine. I looked at myself especially in that winter jacket I was wearing, and I thought about that Seattle Lonely Planet book in the pocket of my jacket which had told me just minutes ago that it was supposed to be rainy at this time of the year. The other thing I remember was the friendly welcome from Michele and two of her colleagues from Boeing, who showed up to meet their two new interns. I really have to thank these guys for taking care and providing me with a nice place to stay for the first night in Seattle, especially taking into account that I wasn't going to work for Boeing.



The next days were really exciting and exhausting too. I had to find a place to stay, I had to register at University and I had to

overcome my jetlag. During these first days I would have preferred offices to have been open from 2 am to 10 am. However, everything went better as I thought it would, thanks to David Fenner and Tina Wong from the University of Washington International Programs and Exchanges, the guys from FIUTS, Wanda Frederick Department of Aeronautics Graduate Program Coordinator and many more very kind and helpful people. So by the beginning of the spring quarter I had a room, I was registered for three classes and I had also found two buddies to hang out with. The only unexpected thing I remember was the result of my own stupidity to forget my vaccination card at home. So I had to go to the health service in order to get a shot against measles and a couple of days later I had little red spots everywhere, fortunately just for two days.

The classes I took during the spring quarter were an undergraduate course in Project Management, a graduate course in Multivariable Control and I also started to work on a project, which I have been considering as my main academic mission over here. The subject I have been working on concerns the near field characteristics of crossflow jets. One important application is the cooling of turbine blades in aircraft engines and stationary gas turbines. Previous investigations, a great deal of them conducted by my supervisor Prof. Kurosaka, have shown that the hole shape of the jet pipe has a strong influence on the cooling efficiency. This is a result of different vorticity alignments especially at the jet leading edge. My task is to find out about a possible dependency between the actual shape of the hole and the velocity ratio of jet and crossflow. In order to do that I have been conducting flow visualisation experiments at the aeronautics department water tunnel using Laser-induced fluorescence (LIF).



Furthermore, I took a summer class called Business Advantage Program offered by the University of Washington Educational Outreach. I spent forty hours a week for four weeks in class covering a broad area in Business and Economics. I had four really interesting weeks not just because learned a lot, I also met very nice and interesting people and had massive amounts of fun. I really have thank David Fenner and Erika Walker who worked out all the bureaucratic obstacles in order to get me into the program.

Apart from my educational mission, I of course have been exposing myself to the uncountable entertainment, leisure and nightlife opportunities offered by a place like Seattle.

The first few weeks my friends and I checked out everything new and different from home. I went to see the Seattle Super Sonics basketball team. That was awesome, especially since I'm a big Super Sonics fan. The baseball experience was different. The game (Mariners vs. Yankees) was, according to everybody else, a wicked one. Unfortunately by that time I had no ideas about the rules so everything looked kind of odd to me. However, I didn't just watch all that stuff, I also gave many new things a try, like golf for instance. It is hobby that I personally regard as becoming more and more important as one gets older, especially if you have one of those funny little cars. Unfortunately I came to realize that

I'm not a naturally gifted golfer. Several times I went hiking around Seattle and in opposite to the hiking experiences I had made so far, I really enjoyed it. Mostly because of the amazing scenery and wildlife all around Seattle. I also went kayaking up to San Juan Island together with friends from class. We stayed there over night at a little island with no water or electricity but a bunch of funny racoons, who ate all my food while I was sleeping.

There are a probably enough stories to fill ten more pages but there is one last thing I have to mention because it really made a great impression to me – the fireworks on the 4th of July. That was something I had never seen before and even my buddy who regarded himself as an “expert in fireworks” (I don't know what he meant by that but he did not suffer from any dismemberments), had to admit that they did an incredible job.



All in all, I'm really grateful that I was given the opportunity to benefit from the outstanding opportunities offered by the Reinhardt Abraham Memorial Foundation Exchange Program between the Technical University of Berlin and the University of Washington. It has been wonderful time in Seattle and I going to miss all the charming and open-minded people who, from my prospective, make this place so special. There might be one thing to complain about, the weather. There were so many days where I really had force myself to stay in the Lab and do work instead of enjoying the sun outside at one of the many nice

place all over Seattle, and that has been hard.



Finally I would like to say a special thank you to Mr. Mitsuru Kurosaka, Ms. Marianne Reichow, Mr. Gerwin Dienger, Mr. Peter Struck and Ms. Jutta Gbur. All this would have been impossible without their help and support.

Student Exchange Programm (SEP) II

Currywurst , Cranes, and Sauerkraut: My Adventures in Berlin (October 2000-April 2001)

...at the TU Berlin as a visiting graduate student.

By Sarah McQuaide.

“My word,” I thought to myself as I boarded the plane connection bound for Berlin from Frankfurt. Even with my weary eyes I noticed the bulging muscles on the people surrounding me. “Germans are in shape!” Sitting all around me in the cabin and speaking in loud, happy voices were 20 or 30 muscular Germans- complete with beautiful bronze suntans. I was seated next to a very athletic man wearing the odd combination of a straw hat and a training suit, looking like Crocodile Dundee getting ready for a track meet. Was everyone so sporty in this city I was headed for? An even stranger scene met me at Berlin Tegel airport. As I

waited for my luggage in the baggage-claim area I saw on the other side of the glass wall hundreds of people waving and cheering and carrying big banners. “What a welcome!” I thought to my jet-lagged self. “I have never had a reception like this!”

I soon learned, of course, that the reception was not for me- it was for the fit, tanned, athletic Germans who had accompanied me to Berlin. Adorning numerous pieces of luggage coming down the turnstile were Olympic rings and the phrase, “Deutsche Rudernationalmannschaft”- this was the German National Rowing team, coming home from Sydney! I’d had the honor to fly with Olympians- no wonder they looked so athletic!



My own reception was a bit smaller but no less special than the Olympians’. Peter Struck and Marianne Reichow of the Reinhardt Abraham Memorial Foundation, along with Jutta Gbur of the Technical University International Exchange Office greeted me with flowers and warm welcomes. We drove directly to the Internationales Studienzentrum Berlin (ISB) where I would be living for the next six months, located in the Berlin neighborhood of Charlottenburg. I had my first taste of Berlin traffic as we joined the throes of commuters filling the streets. At the ISB, a tall building formerly used to house soldiers from the Allied countries, we were met by Frau Fritsche, director of the center. I was given a tour and spoke with Peter, Marianne, and Jutta over a wonderful lunch in the downstairs (American!) restaurant, after which I was left on my own

to begin an adventure in the incredible city of Berlin...



What a place! Berlin is alive, alive day and night, alive in the sun and rain and freezing weather. I have never lived in a place so huge, busy, chaotic, noisy, and fantastically exciting. A look over the Berlin skyline shows evidence of the rapid growth of the city, where from week to week new structures appear and whole streets can be transformed into places unrecognizable from a month previous. Alongside beautiful pre-war undamaged buildings are 1920s Bauhaus-style structures, boxy 1970's architecture, and modern 21st century skyscrapers...often situated so close to one another that the contrast is shocking.

The ISB is located in ideal part of Berlin, especially for Technical University students. The TU is only a 10-minute U-Bahn ride from the ISB, and the train can be caught literally outside the ISB doorstep in Theodor-Heuss Platz. Encircling the huge roundabout of the platz is a vibrant cluster of little shops, boutiques, and markets, making shopping very convenient- as long as one remembers that there are no all-night groceries in Germany! Saturday becomes an adventurous attempt to buy food since stores are closed on Sunday; aisles in the markets are a zoo of people, shopping carts, and excited children.

Charlottenburg is a beautiful region of Berlin, with many old, tall buildings and beautiful facades. But the absolute best part about this region is its proximity to the Grunewald, a huge forest bordering west Ber-

lin. The forest is only half a mile from the ISB, and I spent many days exploring the long trails on my morning run and climbing the tallest hill in Berlin, the Teufelsberg (Devil's Mountain). Running on the Teufelsberg is like running on top of history- the man-made mountain was formed from all the rubble of houses destroyed in the Second World War. The miles and miles of Grunewald trails lead westward to the Havel See, a beautiful lake that I sailed on a few times with my German friends. One can sail, bike, or swim south from here to the city of Potsdam, a beautiful town with lovely castles and old Dutch architecture.



The ISB is equipped with many conveniences; students are very well taken care of. Most students living there are PhD students, the majority from Russia, followed by America, France, Eastern Europe, and Britain. There were also a smattering of students from Mexico, Africa, and Canada this year. What an exciting place to live! With German as the only common language between all students I was able to improve my language skills quickly- especially words having to do with food! The kitchens became warm and friendly places as people gathered to cook at night. Each floor of the ISB has about 14 bedrooms, a kitchen, and a common living room with cable television. The bedroom rented by the Reinhardt Foundation stiftung is located on the first floor and is so large that 15 people can comfortably fit inside (this was personally tested). With a wonderful large bathroom, a deep bathtub, and lots of furniture this was like having a studio apartment!



There are many cultural events- tours, guest lecturers, and holiday parties- at the ISB, organized by the directors and tutors. It is a wonderful opportunity to meet people from all over the world, and a great place to feel at home in after a long day in the city or at university. The directors organized a nice welcome banquet at the beginning of the year for all the students to meet each other, and at Thanksgiving, Christmas, and New Year there were ongoing celebrations among those who remained in Berlin for the holidays. I have made incredible friends during my stay that I know I will be in contact with long after we separate.

My work at the Technical University has been a fascinating experience. I worked at the Microsensor & Actuator Technology (MAT) Institute, researching microelectronic mechanical systems (MEMS). MEMS is a fancy acronym for "tiny machine"; this area of technology has become very important during the last decade as devices in our world become smaller and smaller. One area of research at the MAT focuses on sensors for measurement of pressure, force, acceleration, temperature, humidity, gas flow and gas concentration. These sensors are passive devices (they do not effect their environment) and are used in a range of applications from cars and airplanes to medical devices and optical systems. The other area of research at the MAT focuses on actuator technology. Actuators, in contrast to sensors, are active devices that effect their environments. These devices include micropumps, -mirrors, -switches, -scanners, and -valves. Actuators

are also applicable in a wide range of fields including medical and biological systems (such as minimally invasive surgery) and in information storage and distribution (including computer networks and telecommunication).

Although it seems like ages since my plane touched down in Berlin six months ago, the time has gone incredibly fast. I thank the Deutsche Lufthansa Berlin-Stiftung & Reinhardt Abraham Memorial foundation for sponsoring my internship at the TU and for my room in the ISB. I also thank Peter Struck and Marianne Reichow of the Deutsch Lufthansa Berlin-Stiftung, and Jutta Gbur of the TU International Exchange Office, all of whom made my stay in Berlin friendly and comfortable. I will be returning to the University of Washington with enthusiasm and energy to publicize the Reinhardt Abraham program, and encourage other students to take advantage of the amazing adventure that it has to offer!

Student Exchange Programm (SEP) III

Winterly Seattle

Two quarters at the University of Washington in Seattle as a visiting graduate student from September 2000 to May 2001.

By Mirko Salewski.

Arrival in the Rainy City

After I had learned that two years ago it has been raining for 103 consecutive days in Seattle I made sure to travel with my rain coat. However, when I arrived in Seattle, the city greeted me with sunshine and blue sky. The Boeing trainees Jasper Corleis and Ulrich Heine who arrived 4 months earlier than me picked me up from the airport and took me to their apartment where I could sleep until I had found a place to stay

myself. I had met them before in Hamburg at a meeting with the Reinhardt Abraham Memorial Foundation team. This was very helpful because I already knew people in Seattle before I even arrived.



My Apartment

Fortunately I found a room in the University District 50m off campus after I had searched for only 1 hour. My street was a pure student street, hence it was very loud and lively. Unlike most of the other international students, I moved into a shared household with 4 American roommates. I enjoyed the warm, friendly, and sometimes loud atmosphere in this apartment. There were so many people around in this apartment that I had to remember about 50 names within the first week. This way I got to know many Americans very well.

The University

However, I was not in Seattle only for socializing but also to study. The campus university is beautiful with old brick buildings and many trees and parks. Also, it is very convenient to have all the departments on campus and not spread out over the city. It is situated next to Union Bay, Lake Washington and you actually see the water from the campus. Mount Rainier appears to

be in walking distance on clear days and adds to the beauty of the campus university when you sit on Red Square, the central square on campus.

The Classes

I took classes in Aerospace Heat Transfer, two classes in Energy Conversion, Operations Management, Management for Organizational Effectiveness, and two classes Russian. Studying in the United States seems to be very different from what I am used to from TU Berlin or RWTH Aachen. In engineering I got homework assignments like in high school and there is little room for creativity. On the other hand the professors use multimedia extremely well: Every course has got a homepage with announcements, the course content and the assignments. Some classes are even video taped and shown on TV. The classes in management consisted of many activities like role-playing or experiments. Because of that many students actively participate in the classes.

The computer equipment for students is also extremely good: I never had to wait more than 2 minutes to get a computer with a fast internet access and burners. The computer laboratories are much better compared to the ones we have at the TU Berlin.

The Earthquake

The earthquake that made the swinging lamps in Bill Gate's conference room so famous was on my birthday. I will never forget this birthday.

Since I never was in an earthquake before I thought it was not dangerous. First it felt like a class of children was jumping up and down next door but the waves got bigger and bigger. After I had found myself a doorway I could see a long narrow corridor, and I could actually see it twisting and moving sideways. But I only learned from many e-mails from Germany that it was

actually dangerous. At the UW there was hardly any damage at all.



Sports

Also the UW has got awesome facilities for sports on campus. I got used to hop in the swimming pool between my lectures and swim for an hour or two. This way I was able to combine my hobby with study in the most convenient way I was ever able to. I also used the basketball courts, canoes and weights rooms on campus. My favourite running trail was around Green Lake, a 3 mile run, which I used to practise for the Seattle Marathon. The Marathon was extremely hilly for a city marathon and of course it rained all morning but I still enjoyed it.

The Trips

To relax from the study life I enjoyed the beautiful area around Seattle. FIUTS, an organization for cultural exchange at the UW, organized many weekend trips for international students to help the students to see more of the United States than just a university. I went to the rain forest on the Olympic Peninsula, to Victoria, to Mt. Rainier, Mt. St. Helens, Vancouver Island, Or-

cas Island, Vancouver, and Portland. I also went on skiing trips to Mt. Hood and Mt. Baker. The Boeing fields was also a very impressive sight.

Thank you

I had an awesome time in Seattle and I learned a lot about the American culture. I am grateful that I got this incredible chance to experience a different way of life. Without the help and support of the team of the Reinhardt Abraham Memorial Foundation I would have not been able to do all this. Thank you again.

Trainee Programm (TP) I

There goes another of those lucky ones...

By Edward Hein.

This was one of several similar word phrases I heard numerous times during the first weeks of the Reinhardt Abraham Trainee Program at The Boeing Company in 2001. And I must admit, even after already one successful month completed, I still feel lucky that I had a chance to participate in it. I never felt any different. For readers who want to feel this way too and who have already applied for either the Trainee Program or the Student Exchange Program and did not get accepted, I must tell them, try it again, because this is exactly what I did.

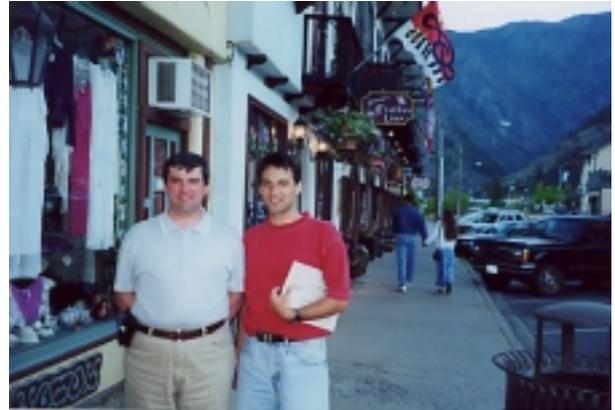
Shortly after submitting my application, I received an invitation for an interview. During this time I was working with Lufthansa CityLine in Cologne parallel to my studies at the Technical University Berlin. I stepped into the interview with anxiety. Because of all the ad-hoc activities going on in my life, I did not feel prepared. But, the atmosphere during the interview was so relaxed, that I lost all of my worried thoughts immediately.

I can certainly say, to be a well-prepared and ambitious counterpart during the interview is definitely an advantage.

The following weeks were heavily loaded. The first thing to be done, of course, was to complete a lot of paper work for the U.S. immigration agency and for The Boeing Company. From my point of view now, with United States and the free world attacked on September 11I have to agree completely. The old slogan counts more than ever - Safety First. Fortunately, I was not alone in figuring out how to correctly fill out all the forms. At the interview in Berlin I met Petra Determann, a student at the Fachhochschule Hamburg and a participant of the trainee program during the same time in Seattle. We were consulting with each other very often via the phone to set up the papers properly. Also, we were invited to a meeting of the administrative departments of the Reinhardt Abraham Memorial Foundation and of the Deutsche Lufthansa Berlin Stiftung DLBS in Hamburg. At the head office in Hamburg-Fuhlsbüttel, we coordinated the most important element, the visa application process. Very helpful in this process was Mrs. Jutta Gbur, the coordinator of foreign exchange programs in Berlin. Without her, I am sure; we never would have met our time schedule. We were the first of the program to apply for a J1 status. Thanks to the DLBS Team, we used our time fully in Hamburg, with a complete tour through almost all of the Lufthansa Technik facilities there.

From former participants I obtained even good support via phone. I met Dirk Krappel (a trainee in 1999) in person in a student coffee shop in Charlottenburg. Just very short of my departure, I asked him about his expenditures in the first week: when buying and insuring a car, renting an apartment and getting some simple room interiors. And last but not least, who I have to contact in case of an illness. But all my troubleshooting was more or less overzealous, everything was superseded by the arrangements The Boeing Company has

made for us as we arrived in Seattle. Sometimes, it is nice not to be always the first, then you will be a lucky one....definitely/right away.



Looking for the essentials in life

On March 21 I woke up from my jet lag coma in the Silver Cloud Hotel in Renton. I was sharing the hotel room with Lars Gutschmidt, a participant of the student exchange program with the University of Washington. The day before, we arrived with Petra Determann as a good trio at Seattle. Michelle Colby (we already knew her through all the foundation newsletters) gave us a very warm welcome at the terminal gate. I personally appreciated this very much, as we were coming transit from Frankfurt to San Francisco to Seattle and I was extremely tired. After a short ride with a Boeing Commuter Bus and a small meal, I fell into my coma again.

There was not really time on 21st to realize that we were in Seattle. Soon, we had another appointment with Michelle to have a look at her office and to drive back to the airport for a rental car.

I remember Michelle's mimic as I was quizzing the auto brand during my check walk around. A Toyota, or..? No, we are here in America, of course, here it is written ahh a Chevrolet! How comfortable!

The next days we spent relentlessly looking in the Seattle Times, the Boeing Classified Ads and on the spot for cheap cars and affordable and places to stay that were lo-

cated close to our individual Boeing plants. I found a room at lower Kenndale, next to Renton. I decided after visiting 6 different places. My room was offered in a house for shared living. All other rooms were already rented. Everything was ideal; a complete kitchen, a washer, a dryer and a deck with a nice view of Lake Washington and Mercer Island. In addition, my very gracious landlord Mrs. Wilson and my housemates were a perfect combination. We spent not only time in the house together, but also went to the stage theater, to summer grill parties, to the independence day fireworks boat tour, to the Emerald Downhorse races and last but not least to the baseball games of the Seattle Mariners. All in all, every day off, was filled and never boring.



For my transportation I bought a Chrysler Plymouth Caravelle, color Mustard, from a Classic car dealer located next to the Renton Municipal Airport. It was produced in 1985 and had a suspect story on the car history webpage, in terms of an obviously rolled back odometer. But, the name of owner during the last ten years sounded like a diligent grandpa and everything looked in a good shape, even after tough testing.

My Caravelle ran more than 10,000 miles to daily work, to Yellowstone, to Vancouver and a couple of times over the Snoqualmie pass in the summer. It broke down two times, once fixed with a minor repair of the radiator and a second expensive one in October. I was a lucky driver, because the Caravelle failed always around the corner. I am proud to say, that I repaired the wheel

ell and the window by myself with available primitive tools. I loved it! I sold the car for \$500, after successful negotiating.

The Program Run

On Thursday, March 29, I started my training at the Airplane Performance and Propulsion Division, in the Production and Fleet Support Team for Single Aisle Operations. This team was located next to the production hangars of the 737/757 and the Renton Municipal Airport. The team consisted of a mix of well-experienced, long-term Boeing employees and ambitious newcomers. So am I, I thought and indeed I never felt alone. I could ask every time I had a question and I got questioned too, so we had all the time a very intense communication. The main responsibility of the team lies in providing Boeing Customer Service units and other internal units with data for a safe and efficient flight operation in terms of the aerodynamic characteristics of the airplanes and the capabilities of a selected propulsion. For an easier understanding, the team runs more like a state of the art back office providing front offices with detailed answers to a customer request. This was advantageous for me as I was able to concentrate all the time on specific airline flight operation issues and on pre-selected cases from the airline community worldwide. The experiences gained in the 6 months matches perfectly to my experience and knowledge, which I had made all the way at the university and in previously completed internships and jobs.

At the beginning, our lead engineer made a perfect decision to get me started into the complexity of the business. He gave me not only an introduction to all the software and data files used, but also trained me step by step so I was able to operate and set up the computer programs on my own. Before presenting it to others, we discussed and analyzed all results in our. I definitely appreciated, because I was involved in almost each task that was going in Single Aisle Team. Honestly, I never before have expe-

rienced such an open minded and fair working environment.

The diversity of the 198,800 Boeing employees worldwide at the beginning of June 2001 represented the U.S.A. perfectly. Surprisingly for me, even the Aerodynamic teams consisted of colleagues who came from each corner of the world. I quickly learned that it does not matter where you grew up to study this science. The pure interest in this subject let people move around the world to find aerospace education and interesting work. The Boeing Company is well prepared to handle eventual conflicts between all these different backgrounds and cultures. Every new employee has to go through preventive ethic conflict training. I have to say, it was very special and I learned a lot about myself and other people. How important ethics training is, I often realize this later. It is not possible for a newcomer to handle every situation by the use of just the common sense. I can recommend the interactive Computer Based Training and the succeeding briefing with my supervisor. European companies without equivalent devices and procedures available shall consider implementing those in the near future.



When I read about training lessons in the Boeing intranet, that took place during work or off work hours, everybody supported me to take part. This resulted in attendance of 6 different classes and very busy weekdays and weekends too. Sadly, I was not finishing the Acoustic and Noise Reduction class, but our instructor knew it difficult to study hard mathematics on Saturdays in the month of July. My daily schedule was

from 8am to 8pm. To be in Seattle during the summer session was an advantage, because after 8pm in the evening the temperatures were high and there was still daylight. A welcome recreational practice in the evening was jumping in to the lakes.



Of course, there was enough time to make trips to the different Boeing facilities in the Puget Sound area to make contact with other engineers and machinists. At the end I was able to give a tour to others, for instance when German customers and former student colleagues came over for training reasons.

I established a special relationship with a wing design engineer from Boeing Moscow. We found out that we have the same hobby – flying gliders. I had already gained some flying experience with gliders of the Boeing Employees Glider Club, where I have been a member. A couple of times we went on long distance trips over the Cascades mountains to locations in eastern Washington to enjoy our passion. Unbelievably, I was able to use my very poor Russian language vocabulary after 10 years of silence, and this in the United States! In the spring we spend on the ground a lot of time with Norman Ellison, a retired Boeing employee and glider enthusiast. Norman Ellison, was a specialist in 737 Control systems and I often sat down and listened to his stories and anecdotes. I will remember Norman Ellison very specially, and of course his family, and the Seattle Glider Com-

munity and the Boeing Flight Control department. In August, Norman passed away suddenly after a very busy life and we all gave him a very respectful and sad Good Bye at a memorial service in Bellevue.

Civil planes used as a deadly weapon to kill innocent people

It took not much more than a second on September 11: If a student dedicates almost his whole life to work on and fly airplanes and had a previous experiences in eastern Europe, where it was for political reason forbidden for everybody to access an airport area or to operate even a simple flying kite, to realize that the new freedom will be a challenge to keep in the future! Very bitter is this to me, but my bitterness is nothing compared to the bitterness of the innocent victims, bereaved families, relatives, friends, colleagues, acquaintance of the attack or of free living people in the world with a common sense. With them, I am mourning.

Fall 2001 was a very sad season in Seattle

Just a couple days later of the attack, The Boeing Company management announced there will be massive lay-off following the shut down of air traffic and the tumbling down demand in new airplanes worldwide. Every reader can imagine the reaction of my colleagues, as the number of 30,000 lay-off was announced in the Boeing Commercial Airplane Group and the impact this will have to the Puget Sound area. As I was leaving the United States in a 37 seat aircraft with 4 passengers onboard, it hit me hard again. What about the prospect of the aviation industry in an aviation crisis?

I hope that the Reinhardt Abraham Memorial Foundation Internship program will continue even in these difficult times. It provides us students a good preparation to become professional engineers in the aviation industry with English linguistic proficiency

and understanding of the United States and German relationship.

I want to give special thanks to all sponsors and supporters of the program that I have not met in the United States and in Germany, because I know there are many. I have already given the supporters I met a warm personal *Thank you*.

Trainee Programm (TP) II

A six month traineeship at Boeing Commercial Airplane Group, Seattle

By Petra Determann.

We are driving over the West Seattle Bridge and my roommate suddenly asks me: "What do you like the most about Seattle?" I am thinking this is really a difficult question. But then, after a couple of seconds I reply: "My job at Boeing."...

When I arrived in Seattle on March 22nd, 2001, everything was so new to me. I was very excited, because it really was a dream to work for Boeing in America. The first thing I noticed was the Car Pool Lane. And then all the big cars. I've never been to the States before so I was fascinated. After some organization problems (i.e. they gave us the wrong social security number on the phone, which caused a lot of confusion afterwards), my first official working day was set. I started working in the PSD (Propulsion Systems Division) Strut Systems Design and Installations Group. They design and install strut systems between the wing and the engine. I had to do lots of paperwork. For example, changing the Parts List. The most interesting work, my very friendly Lead Engineer Mark gave to me, was a kind of research job. I reviewed and coordinated ELRs (Engineering Liaison Requests) submitted by mechanics. This involved investigating a sealing problem where the drawing was not very clear. It gave

me the chance to get away from the PC, go downstairs to the Shop people and take advantage of their knowledge and experience.



I also enjoyed being so close to the engines, which are gigantic. But I realized quickly that this wasn't the kind of job I dreamt of all my life (somewhere on the way between the interview in Berlin and the job offer at Boeing in Seattle there must have been a misunderstanding). I missed seeing and feeling the entire airplane, and whenever I heard an airplane take-off or land, I had to hurry to the window to catch a view of it. My co-workers recommended and encouraged me to change to a group where I could get closer to the airplanes. After two months at PSD I went over to the 'Flight Test Engineering Analysis Avionics Group.' (Here I have to say Thank You to Michelle Colby, our very helpful Human Resources contact, also to Vincent Robel, the Supervisor of the PSD Group and to Byron Billingsley, my new Supervisor who was very accommodating and invited me immediately for an interview). From the first moment I walked into the Flight Test building I felt comfortable. There is an amazing view from the 4th floor: the flight line with colorful airplanes with Mount Rainier as an impressive background. I wanted to stay! Flight Test Engineering (FTE) is in the same building where the 737 is being delivered to the customer so I got to see each one of them.

So, for the last three months I've worked in the Flight Test area. My Lead, Danny and

my co-workers Duc, Ron and Jeff gave me an overview, what Avionics testing is about. On my first working day I went to a 737-800 with Duc and he showed me how to download the FDR (Flight Data Recorder). Walking along the flight line was amazing. The Shop people explained about their work and would always take an interest in finding out, which part of Germany I am from. Most of the time they would say to me "Oh, I have been in Germany."



After downloading the data we went back to our desk and processed the FDR data for a specific flight. This request of analyzing FDR data from different airplanes is one of the responsibilities in the Avionics Group. In the first week I was invited by the Stability and Control Group, to fly with and help Juan, the responsible Flight Test Engineer, with a lateral trim test on the first 737-900 ever build. This airplane has all the instrumentation and test equipment in it. We flew all along the Oregon Coast on a beautiful sunny day and very close to the ground. We headed south for two hours and then flew back. After we finished taking the appropriate data we could really enjoy the flight! We also did ground tests on a 737-700 where we checked the temperature effects on elevator & rudder systems and on a 757-200 where we tested the Audio Accessory Unit (AAU). The most interesting test I did was a 777-200 ground and flight test. My assignment was to complete all of the necessary communication, preparation,

documentation, conduct, analysis, and reporting of the testing in order to certify certain systems prior to delivery to the customer.

It started with getting an EWA (Engineering Work Authorization), which is a document, used to describe specific test requirements. Several other documents including a Test Item Planning Sheet (TIP) had to be written. TIP Sheets are detailed plans for accomplishing a specific test and have to be approved by several people (i.e. the Lead Engineer, Operations and the Supervisor. Once everyone (including the pilot, if it is a flight test) gives their approval, you are ready for the test. Just before the flight was scheduled I had to ensure that every test participant was informed about time and place. After much rescheduling, (always in contact with the Test Director), we conducted the test. My job as a Flight Test Engineer was to witness the test, write down notes and coordinate each test condition. I also took part in a 737-900 Passenger Address (PA) System Intelligibility Flight Test. This was a very busy 5-hour test. Luckily some other testing was going on, that had to be done at nighttime, because adequate lighting characteristics of the Flight Display had to be demonstrated. So we had a fantastic flight with an exciting landing at midnight.

Besides work there were so many impressions for me. I really enjoyed driving my 20-year-old Oldsmobile (with my "PIDDY" license plate) along the highway, enjoying the wide streets and listening to some good music. Since I am very interested in all kinds of music, Seattle is the perfect city. There were many opportunities to go to some very good concerts. I visited the EMP (Experience Music Project), which is an interactive historical exhibit where you can try some instruments and where they show you all the information about bands that came from Seattle. It was amazing. Besides that I took an African Drumming Class and met some interesting people there. Especially my teacher who was originally

from Jamaica. I also enjoyed the outdoor activities. We went hiking at Mount Rainier in the deep snow and at the Twin Falls and saw the incredible waterfalls. Another fun thing was my first ride on a snowmobile in the Cascades. Tom and John, both co-workers from PSD, took me along and gave me a snowmobile to drive. I thought this could not be that difficult because I am used to driving my motorbike. But after only one mile I drove down a steep hill and crashed. I was lucky that there was a tree I could hit. After recovering from that shock we had a fun time and we drove about five hours in the snow.

I am very grateful to everyone involved in the exchange program. Especially I want to say "Thank You" to the Reinhardt Abraham Memorial Foundation because they "tried" somebody outside the Berlin University and gave me the opportunity to take part in this program as a student of the University of Applied Sciences in Hamburg. Being in two different areas at Boeing gave me the chance to meet more people. And all of them were very helpful, i.e. when I wanted to sell my lovely car, they gave me good "seller's advise" ("..no one will ever buy the Piddymobile...."). I am really very thankful for having been able to live and work in Seattle for six months and will never forget the time here.

If somebody would ask me what could be improved in this exchange program I would recommend a list of current names and addresses from the students who are either in Seattle at the moment or who have been there. Also it would be helpful to have an overview of Boeing's different work disciplines before we come to the Company.

And so, as I reflect on how I answered my roommate that day on the bridge that "My job at Boeing" was the thing I like most about Seattle I realize just how true it is. The time has completely peaked my interest in continuing my education in aviation engineering and perhaps pursuing the idea of flying these magnificent machines.

THANKS AGAIN MICHELLE, RON BENGELINK, MARIANNE, PETER STRUCK, PSD, AVIONICS, and everybody else who was involved in helping me have a fantastic experience.

Welcome to Boeing's Heiner Wilkens and Christopher Morgan!

By Dr. Gerwin Dienger.

On occasion of the last Annual Committee of Trustees (CoT) Meeting in Berlin, October 29/30, we could welcome two Boeing representatives now directly supporting the RASf foundation: Heiner Wilkens and Christopher Morgan, assisting Heiner.

Heiner Wilkens is Senior Vice President and General Manager of Boeing Commercial Airplanes in Europe and Russia. He is based at Boeing's Head-quarters in Brussels, leads Sales and Marketing in Europe and Russia and coordinates all Boeing European activities. In this latter responsibility he accepted also the CoT membership.

Heiner, born in Hamburg, graduated in Economics from Hamburg University. He held a number of executive positions at Deutsche Lufthansa, at Pratt&Whitney Aircraft Engines and at Cargolux Airlines before he joined Boeing. During his time at Lufthansa he was working together with Reinhardt Abraham, at that time Lufthansa's CEO Technical and Deputy Chairman, and with Dr. Gerwin Dienger, DLBS/RASf Chairman, at that time Senior Vice President Fleet Projects and Engineering. Because of this very personal relationship, Heiner greatly appreciates to be now involved with the Foundation established in memory of his former mentor Reinhardt Abraham.

Christopher Morgan is Sales Director of Boeing Europe and in particular has the

sales responsibility for the Lufthansa Group. Chris, born in Detroit, graduated as MS in Aeronautical Engineering from the University of Washington. Before that he had already worked for Boeing for 6 years as an aircraft design and test engineer (BS). Later on he joined Boeing's Customer Engineering, thereafter the sales organization. Chris is based at Boeing's International Corporation Office in Neu-Isenburg.

The RASf team is extremely pleased to have Heiner and Chris now on-board the RASf Foundation and extends to them a hearty welcome!

Interviews and Election of the Trainee Program Students for 2002

By Dr. Gerwin Dienger.

On October 29, 2001 the representatives of Boeing (BC), the Technical University Berlin (TUB) and the Reinhardt Abraham Memorial Foundation (RASf) met in Berlin to hold the annual Committee of Trustees (CoT) meeting followed by the interviews of the TUB students who applied for the 2002 Trainee Program (TP) at Boeing and the subsequent candidate election.

17 students could be welcomed by the CoT members for the interview process. This high number of applicants was a very satisfactory positive aspect after having had only 4 students in the previous year. Within this one year's period the personal „PR-engagement“ of the former TP-students Ulrich Heine, Jasper Corleis, Torsten Busacker and Andreas Reinke resulted in this increase up to the 17 highly qualified students for the only three TP places available.

They all were a little excited but also keen to hear about the program itself. After a friendly welcome and various informations

about the TP the individual interviews with the Boeing representatives began. Every candidate had to perform two interviews in English language, one with Heiner Wilkens and one with Christopher Morgan - the new members of the CoT introduced above. Subsequent to this tough job, tough for candidates and interviewers as well, the CoT-Team met again in order to make a final election decision which really was not an easy task. *„We would love to take them all, as all of them are excellently qualified“*, was the first statement of Heiner Wilkens. After quite some discussions an unanimous result was reached. Besides Cornelia Henning, who had qualified herself already in the previous year, Martin Otzik, Kristian Käpernick and Christian Berning were elected for the Trainee Program in 2002. Congratulations to them! We are sure that they will contribute like their 16 predecessors to the continual success of the RASf / Boeing Trainee Program.

Professionals with Heart – Michelle, Marianne and Jutta

By Dr. Gerwin Dienger.

Ask a typical RASf student what „organizing RASf“ is all about! No matter whether a „she“ or a „he“ the spontaneous answer will be: Michelle, Marianne and Jutta! These three ladies are our „Professionals with Heart“ - professionals in running the RASf process, although it is just one out of many of their daily business commitments.

But the RASf issue is the one Michelle, Marianne and Jutta have their heart-blood involved, they just love taking care of their students, their „big kids“. And those feel it, enjoy it and relay it back in appreciation and gratefulness.

Who is working for whom? Michelle for Boeing, Marianne for the Deutsche Lufthansa Berlin-Foundation and Jutta for the Technical University of Berlin.

Jutta runs the „Application Center“ for the Berlin students applying for Boeing's Trainee- and the Exchange Program. She advises and supports the students in regards of all application issues e.g. C.V., professor's recommendation, academic record, certificates, language test, visa and all personal concerns. For the students from the University of Washington she provides detailed support and guidance to manage their Berlin stay and University assignment.



Marianne runs RASf's „Liaison Center“. She is controlling and coordinating the regular RASf issues and acts as our „travel agent“. She takes care of all travel arrangements, planning and ticketing and advises the students of their „Can do's“ and „Cannot- do's“ (Can I fly home Seattle-Hawaii-Berlin? Cannot get a booking, only stand-by? Cannot fly at my dates...?). In particular, she puts major effort into keeping the RASf student family together by intense contact care.



Michelle acts as the RASf „Distribution Center“ at Boeing. She welcomes the Berlin

students, provides guidance regarding accommodation and distribution within the large Boeing organisation. All US visa problems are taken care of by Michelle.

Now, from the above and the students' extraordinary appreciative feedback it becomes obvious that our three ladies really are professionals, professionals with a big heart for big kids!

We are very glad and proud that we have them in our RASf Team providing such valuable support to the students - and also to the RASf Management!

Thank you very much, Michelle, Marianne and Jutta!

The time after...

By Nadja Wokurka.

From August 1998 till March 1999, I took part in the second round of the RASf internship program. During that time, I was mainly working on the 757-300 project in the Stability & Control Group of BCAG's Experimental Flight Test. This article is intended to give a short impression on what has happened since my return to 'Good Ol' Europe'.

First, there were some final exams left to pass. After that, the work on my diploma thesis could begin in the Future Projects/Technologies Group of Airbus in beautiful Hamburg. There, I was developing a preliminary design for a freighter aircraft in blended wing-body configuration which should have the same payload-range characteristics as the freighter version of the A380. Not only was the topic very interesting, I had also the opportunity to get to know the other huge aircraft manufacturer in the world from the inside, and that such a short time after the internship in Seattle.

Once having finally graduated and being a 'Diplomingenieurin', I had to take the -not

so easy- decision, where to start my 'real' professional life. I joined the company Fairchild Dornier, which designs and manufactures regional transport airplanes and is situated in the South of Germany, close to Munich. There, I'm working as a development engineer in the Stability & Control/Flight Simulation Group. That gives me the opportunity to draw on my experience gained during the time in flight test and, of course, to obtain further knowledge in that area.

The group's main task right now is to assure the certification of the 728JET regarding its handling qualities. To do that, we use, beside the classical analytical methods, an engineering simulator in which piloted simulation sessions are conducted. Another task of the group is the preparation and delivery of the data base to the manufacturer of the training simulator.

Particularly, I'm looking forward to the roll-out and first flight of the 728JET in spring 2002 and to the subsequent development and certification flight test program. The analysis and evaluation of results from those flights will be my main task during that time. When our launch customer, the Lufthansa CityLine will take delivery of the first 728JET in 2003, we will be already very much involved in the 928JET project, the stretch version.

Finally, I'd like to mention that the 8 months in Seattle represent a valuable chapter of my life, professionally and personally. I'm looking forward to meeting the people from RASf as well as the other alumni of the program again, *hopefully very soon*.

DGLR „Jean Roeder Award 2001“ for Nadja Wokurka

By Dr. Gerwin Dienger.

We congratulate Nadja, one of our RASf-Students - Trainee with Boeing from August 1998 to March 1999 - for having received the „Jean Roeder Award 2001“ by the DGLR, the German Aerospace Society.

Nadja was selected by the DGLR-Jury for her Diploma thesis titled „Conceptual Study as to a Flying Wing Air Freighter“ accomplished at the Technical University of Berlin. See also her own words as to this research work in the article „The time after...“.

We take some pride that one of our RASf-Students was awarded for her outstanding scientific performance!



Congratulation to Nadja Wokurka by Dr. Gerwin Dienger after her Award at the DGLR Annual Conference, Hamburg, September 17, 2001.

Jean Roeder is the former Airbus Industrie's Head of Design Office highly recognized in the aviation industry. Noteworthy in this regard, that Reinhardt Abraham and Jean Roeder have had an excellent relationship, both of them contributed signifi-

cantly in the past years to the further development of aviation technology.

Again, congratulation Nadja and all the best for your further career!

In memoriam

On January 27, 2001 our former SEP student Page LeRose passed away due to a fatal horse riding accident in Vancouver, Washington, USA. She only reached an age of 27.

We members of the Reinhardt Abraham Memorial Foundation together with our students were deeply affected having learned about her tragic fatal accident. We remember her as a lively, amiable and very active young lady who won sympathy due to her cheerfulness, spontaneity and her young-hearted charme.

During her RASf research internship at the Technical University in Berlin from May to October 1999 she impressed by her profound knowledge-base as a Chemical Engineer. In the Institute as well as in the International Study Center Berlin she could enjoy many new friends.

On occasion of her visits at the Lufthansa Base in Hamburg she won the

hearts of all of us involved with the Foundation immediately.

We will not forget Page LeRose.

Sundstrand Aerospace.

The members of the Executive Board of the Foundation as well as the Committee of Trustees would like to express their gratitude and *thank all donators*.

Thanks to the Donators

Since the middle of 1996 until December 2001 a number of renowned companies as well as private persons helped to raise the capital assets of the RASf by donating round about half a million USD. The capital has been invested and the annual earnings are used at full extent (no administration costs) for the internship programs.

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RASf InfoSite in the WWW: RASf Newsletter online

The Deutsche Lufthansa Berlin-Stiftung has relaunched its **Internet Site** in March 2001. You can now get all information about the Reinhardt Abraham Memorial Foundation online: www.rasf.de or www.dlbs.de. The DLBS InfoSite offers all information about the activities of the Reinhardt Abraham Memorial Foundation and even this Newsletter online! *Click it and try it!*

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