Reinhardt Abraham Memorial Foundation

Newsletter 2005

Edition No. 8

Dear Readers,
Dear Friends of the Reinhardt Abraham Memorial Foundation,
My dear Aviation Colleagues,

I have been asked to write a few words to introduce the latest installment of the RASf Newsletter and I am delighted to have this opportunity to do so. It is again a time of transition for me and my family as we have accepted a new assignment with Boeing and will be based in Hong Kong from the first of next year. Some of my fondest memories, with which I will leave Europe, include my involvement with the Reinhardt Abraham Stiftung. I am proud of the program that Boeing and Lufthansa have established together with the Technical University of Berlin, and even more proud of the students who have participated. This is a program that is dedicated to promoting creativity and advances in aviation engineering. I am most impressed with your hard work and dedication, because it is exactly these qualities that will be needed to solve tomorrow the many challenges our industry faces today.

I am struck that the mobility our industry has made possible through high speed air travel, means that the only real barriers to moving around the surface of this beautiful planet are in our mind. I believe strongly that commercial aviation is useful not only for the purposes of "commerce" but also towards bringing people closer together and promoting exchange of cultures and ideas. I urge you all to do great things, and am confident in knowing many of you, that you shall.
Alles Gute
Christopher L. Morgan

Continued work

Maike Schulz
Boeing Intern
from Sept. 24, 03 to April 23, 04

Like my predecessor Frauke Hoffmann, I started my internship in the Interior Noise Group for Single Aisle Commercial Airplanes at Boeing in Renton.

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There, I continued Frauke´s work on a code for Sound Quality metric loudness testing.
Besides this, I got the chance to coordinate, participate, analyze, and document a prototype flight deck muffler test in the Noise Laboratory. The test series was completed by a Ground Test, which I also used for a Ground Boarding Test based on ECS duct changes.
For the last two months of my internship I transferred to the 7E7 Interior Noise Group in Everett. My major task there was to predict the transmission loss for noise insulation on test panels and to compare these results to test data.
Even if I spend the “rainy” wintertime in Seattle I discovered Seattle a lot by walking and had a great time up in the North West. I made quite a few new friends, both at and outside of work, who supported me during my stay. We did a lot of things together like skiing, celebrating Thanksgiving and Christmas, and playing Basketball. This way, I´ve not just got to know Boeing, but also experienced a culture, which was absolutely new to me.
The time at Boeing was one of the greatest in my life. Many Thanks to everybody who made this possible!

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Ability times three

Bogdan Kraskiewiecz
Boeing Intern
Sept. 24, 2003 - May 1, 2004

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One week after my arrival in Seattle I was using my intellectual power for the benefit of the Boeing Company. I was assigned to the Reliability, Maintainability and Testability Engineering group (RM&T), which works in Renton and Everett. In the first two months I dealt with various types of in-service-data of the whole Boeing fleet arriving from the airlines to the Data part of RM&T in Renton. My tasks as a Data Analyst included analyzing and entering schedule interruptions, component removals, flight hours, landings and structural damage data into the database. After this preliminary training I was moved for the next 4 months to the Analysis part of RM&T in Everett. My assignments there involved building customer impact trees (CIT) for engineering changes and my own reliability growth project. Going through the CIT process showed potential positive and negative impacts generated by an engineering change on the customer and helped to determine weather the planned change is really beneficial and if it should be approved. The reliability growth project was based on 767 and 777 component removal data which analysis has shown potential systems to be improved in order to gain reliability. The design of the 7E7 shall benefit from this project. My colleagues did a great job in training me, taking me out to lunches and exploiting my skills afterwards. Another amazing experience was touring the huge factory building in Everett, where the wide bodies are built, as well as visiting the one and only moving assembly line for airplanes (737) in Renton. At the end of my Boeing adventure I joined a test flight on a 747 as a volunteer “powered seat operator”.

"Renton Tower Duchess 2008E at BEFA with India request IFR clearance"

On top of all the training received in RM&T I decided to improve my personal flying skills. I joined the Boeing Employees Flying Association (BEFA) based at the Renton Airport. With the amazing attitude of the flight instructors and the unbelievable freedom in airspace management and aviation legislation in the USA, I managed to get plenty of night VFR training, an instrument rating as well as a multi-engine rating.

"Minden Base glider 608 at 26.000 …."

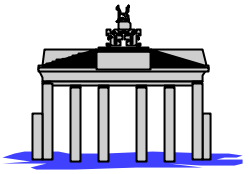
After completing the internship at Boeing and getting my new airplane ratings I couldn't resist going to Minden, Nevada, one of the worlds soaring Meccas. I made some wonderful cross country flights taking advantage of the amazing soaring weather with Cumulus bases higher then 18.000 ft and average climb rates of 1000 ft/min. The highlight was a flight in the Sierra Nevada Wave, which allowed me to climb to 26.000 ft, giving me the altitude diamond I had been hoping to obtain there.

I wish to express my sincere gratitude to all the people involved in the program, as well as those who made my time at Boeing in Seattle memorable.

Berlin - a cultural melting pot

Dan Alanko
Exchange Program to TU-Berlin
Oct. 15, 2003 - March 9, 2004

I recall when I first heard about the R.A.S.F. exchange program and how excited I was about such an opportunity. As an undergraduate I wanted to pursue a study abroad program but was unable to do so; and when I found out that I could participate an exchange program with the Technische Universität in Berlin, it was something I could not pass up.



Upon arriving in Berlin I was fortunate to have two German participants in the exchange program meet me at the airport. It was nice to have some help navigating through the city after a long flight from Seattle. My room in the ISB was more than adequate; however it was not the room that made the ISB such a special place. With students from the former four occupying countries (US, France, Britain, and U.S.S.R.), the ISB, in addition to Berlin itself, is a cultural melting pot. I had the great pleasure of meeting people from all walks of life and sharing stories, interests and traditions that gave me a multitude of invaluable experience. I even met another student from the UW at the ISB; and I thought I was the only one from Seattle!

It was an interesting experience to see firsthand the differences between the US and German universities. The Technische Universität was not what I expected, but proved to be a constructive learning experience. I studied in the Aerodynamik department and was lucky enough to work on an experimental research project guided by one of the professors. I became familiar with testing equipment and special PIV measurement devices that I previously had only seen in textbooks. Overall the experience at the TU

was challenging and rewarding; challenging in the sense that it pushed my independence, knowledge, and communication skills to new levels, and rewarding in that I achieved much more than what I expected.

A very kind way to start our RASf Trainee-Program

Thomas Schmack

Boeing Intern
April 9, 2004 - extended to 2005

Andy and I arrived at the Portland airport excited about our next 6 months as Boeing trainees. Once we passed through the new security procedures, a Boeing van took us to the hotel in Mukilteo. We each had our own room with a view of the Puget Sound and an amazing sunset and sunrise over the islands. That was a very kind way to start our RASf Trainee-Program at the Boeing Company in Seattle.

I felt a little overdressed on the first day, because everybody was walking around in causal clothes. My mentor gave me a working field introduction. He was very friendly and helpful and provided me with a lot of background information. Teamwork is not only a word here. I was surprised by my coworker's openness and ability to listen. That gave me the possibility to develop ideas, to accomplish tasks and solve upcoming problems with support from the whole group. After a short time, I felt confident about taking more responsibility and being a full member of my team.

I am working on the new 7E7 Airplane

in the Stability and Control group. Developing a complete new commercial airplane is a very exciting task. With wind tunnel data from a 7E7 model and applying corrections, our team is getting data like from a real flying airplane. It is very interesting for me to work directly on the flight characteristics for high and low speed conditions.
The goal is to "feed" and update the simulation and provide other groups inside Boeing with data and information. It was also exciting helping to analyze the pilot feedback about the handling qualities.
The challenge is to find the right answers for a so far non-existing aircraft. To do this requires a complex searching, networking and iteration process – teamwork!
For a better understanding of the whole picture, I worked on wind tunnel tests with 7E7 models. After the data evaluation and correction process, we loaded the new database in the simulator and then I was surprised to find myself sitting in the simulator cabin flying and landing this new airplane. To be there when we closed the cycle was an amazing experience that I will never forget.

I also had the chance to participate in a FAA-required 777 test flight to make sure that no electrical use inside the cabin (motor powered seats, entertainment systems) interfered with navigation and communication systems.

In my spare time I started flight lessons. It is really fun "buzzing" over the San Juan Islands in a Cessna. Covered by awesome mountain ranges (the Olympics in the west and the Cascades in the east), the Puget Sound area offers a kaleidoscope of colors and forms. The landscape combines high alpine mountains with an archipelago of beautiful islands.
A kayak is the best choice for exploring coves and empty beaches. If I am not in the air or in the mountain range, then you can find me on the water.

The potential of this internship is unlimited

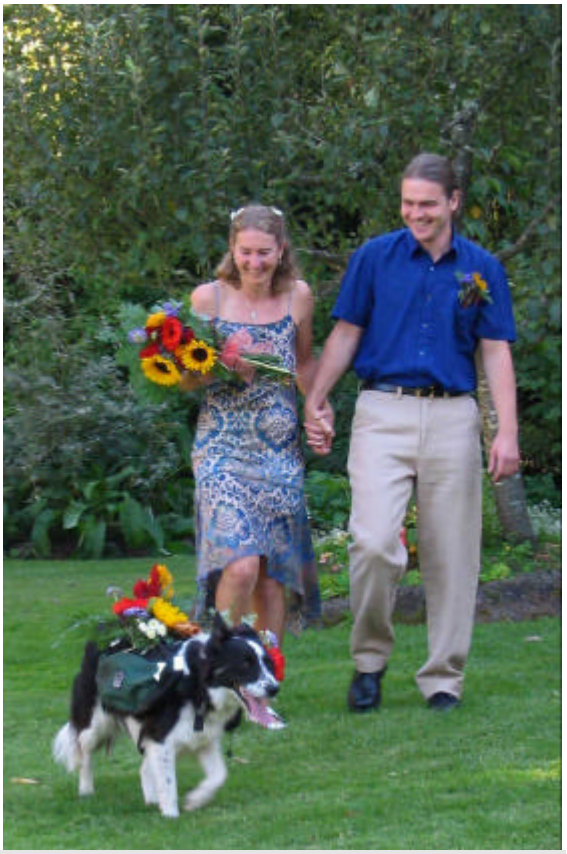
You really can develop it in your own direction. I am so happy I could participate in the outstanding Trainee Program at Boeing and I hope that many other students can experience this internship in the future!

Thomas & Debbie got married on October 10th 2004 in Santa Cruz, California.

Congratulation to your wedding !

Herzlichen Glückwunsch !

The entire RASf Family
Hamburg-Berlin-Seattle



ISM - or how to learn as much as you can in the shortest amount of time ....

Andy Squarra

Boeing Intern
April 9, 2004 -December 23, 2004

"Our Documents provide 'Validation Data', per ICAO / FAA / JAA requirements to support Qualification of Customers' Crew Training Simulators. Where Flight Test validation data are not available, we generate Engineering Data to fill the gap. We perform flight test planning, data collection, data processing, and integrated (end to end) proof of match (simulation vs. flight test) in support of Training Simulator data document delivery and training device qualification".

In April I started my training in the Integrated Simulation Management Group which belongs to Systems Engineering. When I started I had no idea about any of the things they were teaching me. Everything seemed very artificial and cryptic. One primary task of our group is the coordination and production of Training Simulator data documents to support the qualification of simulator operators' training programs. We collect data from different groups (i.e. Flight Test, Aerodynamics, Propulsion, Airplane Flight Manuals, etc.) and run simulations to create engineering data. I had to run and modify these simulations as well as deal with document production issues such as document layout and writing maneuver descriptions. Since the creation of each document requires many different steps, I had to learn a lot of new things within the first few months.

My group was always very interested in training me and showing me all the opportunities they have, and now, 6 months later, I've reached the point where I'm able to train the next intern. This was made possible by the great introduction and the ongoing help and support from my coworkers. In general, it

has been lots of fun to work in such a warm and friendly atmosphere.

Airplane scheduled, appointment with the instructor, flight plan, a last weather check.... maybe a flight next time….

I have dreamt for a long time about just taking an airplane and flying to buy a $50 burger (the average cost of a one hour flight) on a nearby island. I began flying lessons in June and have since spent plenty of hours in a little Cessna. I've been fortunate enough to have had good weather and have taken many wonderful flights into the sunset. What's more, I've already had that $50 burger twice.

Contra Dance, water skiing, camping, hiking, baseball, pumpkin carving and movie nights....

Those who have never been to Seattle will never know what opportunities this city has to offer. Almost every day something was planned. Sometimes it was hard to keep track of all the things on the schedule. Housemates, coworkers, other interns; almost every day someone had an idea of someplace to go or something to do, especially on the weekends. We drove to the mountains, went water skiing on Lake Washington, and met for many long movie nights, to name a few.

Forget what you've heard about the rainy days in Seattle. I had a great summer with a lot of sun and fun. I know I was lucky to be able to join this very unique program, and I hope you keep up this great opportunity.

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The fountain and the mountain*

Ariane Heyden

Exchange Program to UoW
Jan. 2, 2004 - August 22,2004

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It has been the first time in the States for me. Never before did I get the chance to experience this country, so well known as the country of a million choices and possibilities. On January 2nd I arrived in Seattle, when friends (also students from the RASF exchange) welcomed me and helped me to find my way around.

Within the first few days, I managed to find a room to rent, shared the experience of snow fall in Seattle, (which only happens every ten years, if at all) and made new friends in the lab, where I would be working for the next six months.

In Berlin already, I asked a professor for his support of my thesis. Back then I was happy to get quick respond from Professor Dabiri. When talking to other RASF students, I heard that Professor Dabiri might be a little difficult. They were right - the work with him turned out to be very problematic. Within the first four weeks I decided to quit my work with him. Luckily, I found a fantastic new supervisor in Professor Breidenthal right away. With him I have been working on a stability analysis of accelerated Rayleigh Taylor flow.

All in all, my time in Seattle was more than amazing. Life at the UW is extraordinary and a huge difference to Germany. Seattle is described as one of the more liberal cities on the west coast. As a student from Berlin one is most likely very spoiled when it comes to cultural events, but Seattle gives no reason to be bored or to complain. How much do I miss those Friday afternoons, when we jumped in the car and went skiing until 10 pm, no matter if it was snowing or raining! And in the summer time there is no

way to avoid Lake Union, Lake Washington or the Puget Sound.

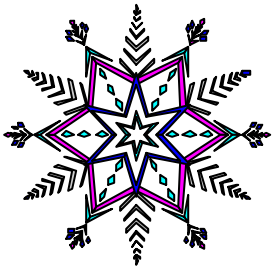
With Professor Breidenthal and other students I had the chance to fly over Puget Sound quite often. Seeing the San Juan Islands from above makes it easy to believe that Seattle and surroundings are some of the most beautiful landscapes in the States.

A perfect end to a perfect time was my trip on Route 1

all the way down to L.A. It was then, when I touched the Pacific for the first time in my life. (I must admit it did not feel that different to any other ocean, but still – it was right on the other side of the planet!)

The last three weeks of my time in the States I spent in Washington D.C. and New York. Every single day was important to finally get a better idea of the US and the Americans and to be able to differentiate between those clichés that are shown in movies and reality.
A big "Thank you" to the Team of Lufthansa Stiftung. Seattle stays for one of the most wonderful times of my life!

*) stands for the famous view on campus, showing the huge fountain of the UW and snow covered Mt Rainier in the background.



Six months at the UW

Ilka Rudolph

Exchange Program to UoW
September 24, 2003 - April 10, 2004

When I first heard the good news that I had received a scholarship to study at the University of Washington (UW) in Seattle for six months, I was very excited about this great opportunity. But as the day of my departure grew closer, I became more and more apprehensive. I had just started a new job at the TU Berlin that I was enjoying and leaving my boyfriend to live in a strange city where I did not know anyone did not seem all that exciting …
I cannot tell you how glad I am that I went through with it, though. Otherwise I would have missed out on a great experience and one of the most fun and exciting six months of my life.

Finding a professor to work for at the University of Washington turned out to be very easy. After emailing Wanda (the aerospace department's ever so helpful graduate manager) and telling her what kind of projects I had in mind, I instantly received a very detailed list of professors she thought might be worth contacting. Based on this list, I started e-mailing professors at the UW and almost always received a quick answer and an offer to work for them. In the end I decided to work for Prof. Breidenthal on a project concerning persistent vortices along a wavy wall.
My part of the project was to do a DNS (direct numerical simulation) of the flow over a wavy wall. But this turned out to be harder than everyone had thought, especially since Prof. Breidenthal had never dealt with direct numerical simulations before and did not have a code to do these simulations with. Therefore my job actually was trying to find

and get a DNS code and implementing it on the computers at the UW. Unfortunately at the end of six months, I did not have enough material to make a thesis out of it, but I am still very glad to have worked for Prof. Breidenthal, because it gave me the opportunity to experience a very different approach to research work from what I was used to at the TU Berlin. Prof. Breidenthal never told any of the students working for him what they were supposed to do or what he wanted them to do, instead he figured we would be more productive and dedicated if we chose our own research topics. This meant that I had to learn how to work completely self dependently, how to solve problems on my own and also how to motivate myself to get work done even though no one was pressuring me to do anything.

Working for Prof. Breidenthal also gave me the opportunity to get to know a lot of other graduate students who were doing research for different professors, because a lot of us had our desks in the same room (the Fluids Lab). Because of this I was able to look into many different research projects at the UW and make friends with other graduate students very easily.

The only thing I would like to criticise is the fact that I arrived in Seattle just a couple of days before the quarter started. This meant that I was not able to attend the "welcome week" for international students and it also did not give me a lot of time to get settled before classes started. I think every exchange student should have the opportunity to at least arrive in time for the welcome week, since it allows you to get to know a lot of other international students and also helps dealing with the huge amount of paper work during the first couple of days.

Before I came to the UW, people always acted shocked

when I told them I would be in Seattle from September to April ("I heard it always rains…"). But what everyone tends to forget is the fact that Seattle is surrounded by mountains. And that means, when it rains in Seattle it snows on the mountains. If you are as crazy about snowboarding as I am, Seattle is the perfect city. There are a lot of great ski resorts within a two hour driving distance from the city and all of them offer night skiing.
All in all, the scholarship was a very rewarding experience. I am very thankful for the opportunity to spend six months in one of the most wonderful cities in the world.

11th CoT-Meeting November 4/5th, 2004 in Berlin

from left to right CoT-Members: Peter Struck (DLBS Hamburg), Don Hofferber (BC Seattle), Marianne Grütjen (DLBS Hamburg), Prof. Jörg Steinbach (TU-Berlin), Michelle Colby (BC Seattle), Christopher Jellen (BC Seattle), Hilla Stuff (TU-Berlin), Dr. Gerwin Dienger (DLBS Hamburg)

Michelle Colby: "I finally made it to Berlin"

I finally made it to Berlin! What a beautiful city! Beginning in August 1997, I have had the great pleasure of working with 28 RASf students for the BCA Global Trainee Program. November 2004 brought me an early holiday present, a trip to Germany to interview students for the 2005 program. The meetings and interviews were a great success! Words alone cannot describe the warmth and emotional feelings of being there meeting everyone. A very heartfelt gratitude to Dr. Dienger, Peter Struck, my dear friend Marianne, Hilla Stuff, Peter Marock, Professor Thorbeck & Professor Steinbach and all other members of the Reinhardt Abraham Foundation for the royal treatment. They keep this program going strong. There is no doubt in my mind Herr Abraham is pleased his vision is still very much alive and well.

My only regret is that I was not able to see more of our former trainees. I had a brief & fun visit with Andreas Reinke, Kai Singh & Maike Schulz. Then in Hamburg was able to meet with Petra Determann. A big huge thank you to Piddy for showing me her new work area and for taking me to St Michaels!

Your warm friendships through the years have become a vital part of my life, which will always and forever hold a special place in my heart.

All my best to you today, tomorrow, and always.

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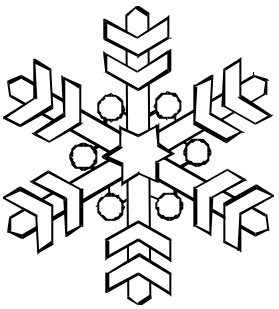
Marianne Grütjen - "..working together with such good partners"

(got married too and changed her name from Reichow to Grütjen)

I believe in this small and nice program which has a very significant value for our students and for our future as well. I work for this program since the early beginning in 1996 and it makes me feel a little proud as we are going to welcome and support our fiftieth student in 2005 ! We still have personal contact to more than 60 % of our former and present SEP and TP students. This makes the program so familiar and very special.
It was a great pleasure for me to meet all of you personally in Berlin and I enjoy very much working together with such good partners.
My personal friendship with Michelle is a very special one which you can see at the photo which has been taken in Hamburg at our Junkers aircraft.
Besides all business, Michelle visited the Berlin-Foundation/Lufthansa Technik Base in Hamburg. Of course, Marianne made a sightseeing tour with her friend Michelle through the facilities and -certainly- showed her the vintage aircraft Junkers Ju 52
D-AQUI.
Petra Determann, a former BC trainee, took the chance to show Michelle / Marianne her working place at the Lufthansa Technik landing gear shop. Thank you Piddy !


Frohe Weihnachten / Merry Christmas
and a good start for 2005 !



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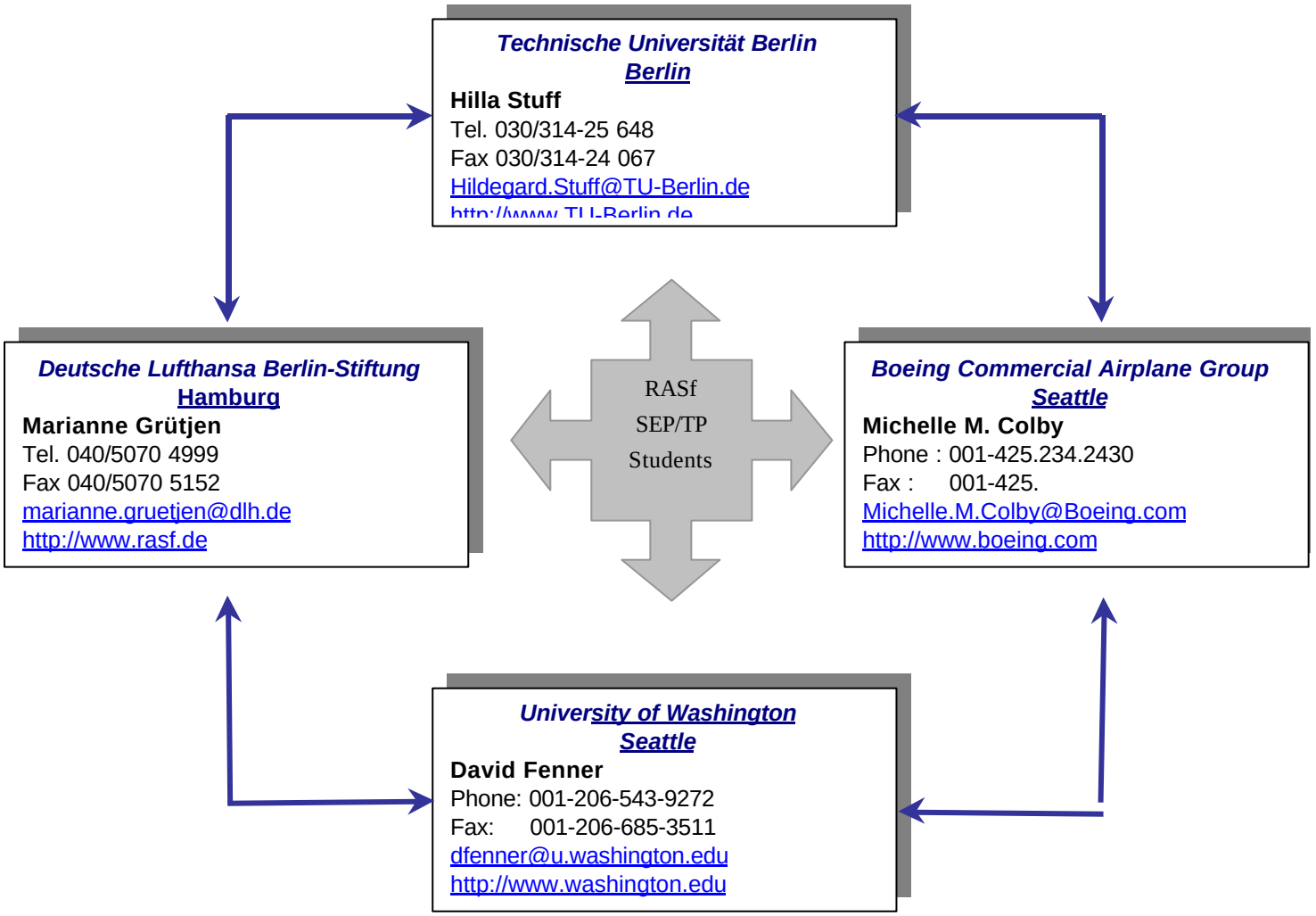

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