New Directions in ISD

By Yigal Arens

Some things will remain the same, but we'll be seeing some changes around here.

ISD has done very well this year. During my "State of the Division" talk in January, I said that funding for 2002 was going to be 37% higher than in 2001. I was wrong. Our division has been so successful in proposing new ideas and projects and getting them funded, that we ended up receiving about 70% more money in research contracts this year than last! There's going to be a lot of exciting new research getting done here in the near future!

Naturally, the size of ISD is increasing as well—as if anyone could have missed the ruckus about who's moving where... We've hired some great new folks, and we're looking for still more.

Since Paul Rosenbloom has moved on to become ISI's Associate Director, I definitely need help in managing this rapidly growing ISD. And I'm getting it.

Ed Hovy will become Deputy Director of the division. He's an experienced research manager and very well suited for this position. With Ed as head of our natural language group—a position he'll continue to hold—we've seen it increase greatly in international stature, size and funding.

Yolanda Gil will take on the role of Associate Director for Research. She will be keeping tabs on the varied research conducted at ISD, helping create new research opportunities and collaborations within and outside the division. Yolanda will continue and expand her role as coordinator of student affairs, while still conducting her own research as well.

(Continued on page 14)

People, Agents and Robots Working Together

By Lewis Johnson

A new DARPA-funded project in ISD is developing technology to help people, agents, and robots to work together in teams.

Although robots and agents are increasingly capable of operating autonomously, they are often not so good at working cooperatively with people. A cooperative robot or software agent should not just proceed on its own, oblivious to the activities of its human partners, nor should it slavishly execute human commands.

A truly cooperative agent should take the initiative when necessary, coordinate its activities with those of its team members, and, in general, do what it can to further the goals of the team as a whole.

The RAP Teams (Robot-Agent-Person Teams) project is a collaboration between ISD and our campus colleagues in the Department of Computer Science. The project members (aka the RAP Team) include Paul Rosenbloom, Lewis Johnson, Milind Tambe, Gaurav Sukhatme, David Py-

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Special points of interest:
* Several ISDers were awarded Research Grants! (page 2)
* Our Natural Language Group has some new projects! (page 6)
* ISD researchers attend the AAMAS Conference (page 7)
Eight proposals were submitted at the beginning of August for the ISI small research grants.

Thanks to the committee made up of Daniel Marcu and Stacy Marsella, who reviewed and evaluated the proposals. Their job was not easy, because there were only enough funds for four of the eight proposals.

When evaluating the submissions, the committee tried to estimate which would be able to make the most progress with the admittedly limited funds available.

The proposals selected were:

Kate LaBore and Erin Shaw: "Create Proposal for ISD Technology Transfer for Online Applications"

Andrew Philpot, Eduard Hovy and Jose-Luis Ambite: "Automated Retrieval, Analysis, and Classification of Internet Recipes for Tailored Food Pantry Distribution"

Kristina Lerman and Aram Galstyan: "Using Artificial Potentials to Analyze Mobile Sensor Networks"

Chin-Yew Lin: "ISI Research Detection and Tracking"

Feel free to ask the recipients about their proposed work!
Thanks goes out to Alma for updating our conference board! If you think that you may want to submit to one of the upcoming conferences, be sure to check the board (located in the kitchen) for the details and deadlines.

We ask that you please not write non-conference related items on this board. Sorry to all you soccer fans out there!
At last, the Advanced Research & Development Activity (ARDA) proudly presents the newest generation of ideal rational agents, called Ardax. It's designed only for advanced research and development purposes. Fortunately, the agent Ardax decided to humanize itself and called himself Arda Celebi. ARDA programmed Ardax so that he thought that he was born in 1979 in Turkey. They also gave him a fake family picture like the Tyrell Corp. did to Nexus 6... or do you remember Judge Dredd? At the last phase of his humanization process, they let him live with the human race. He is working on the Transonic project at ISI now in Room 962. In addition, even though he can't explain how, he feels that the Turing test can be passed. Don't hesitate to contact agent Ardax and talk about language understanding and generation. Stop by and have fun!

My name is Das, short for Dasarathi. I'm doing my PhD at USC. At ISI, I work for Jeff Rickel on the Mission Rehearsal Exercise project.

I am from India, from the garden city of Bangalore but a native of Madras. For my undergrad I went back to Madras—by that time it was called Chennai. I completed my B.Tech in Computer Science from IITMadras this summer. I enjoyed my life in Madras. The campus is carved out of a National Park and it's really big. I was shocked to see that we could walk from one end of USC to the other.

Here in LA, I stay close to campus and haven't had any close encounters of the unl... so far. The best thing I have liked so far is ISI, almost everything about it here. It would be really nice if there were some kind of recreation room here where people could meet and play. There's hardly any chance of meeting anyone from the other divisions.

I like listening to songs (Indian films), and I play a bit of table tennis. I used to play Quake 3 a lot in my undergrad hostel, and I'm looking forward to meeting some quakers here. I also like rollerblading. I'm waiting for some company for that.

I'm in room #950, eat lunch alone, drop by/send mail...
this case over 100,000 hours of interviews with Holocaust survivors.

When he's not working, Doug can be found traveling the planet (he's just back from Finland, Hungary, Austria, Germany, the Czech Republic, the Netherlands, and Italy), flying his plane (from the Santa Monica airport, usually to somewhat closer destinations), or commuting to ISI by bike (something no sane person would do during most of the year in Maryland!). His labor day resolution (hey, you take the opportunities where you find them ...) was to do something cool around here every weekend. So stop by and give him some suggestions!

EMIL ETTELAIE
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I received my BS and MS degrees both in electrical engineering from the University of Tehran, Tehran, Iran in 1992 and 1995 respectively. I am currently a graduate student of electrical engineering at USC. I joined ISI in May 2002 and work here as a research assistant with Kevin Knight and the NLP group.

GONZALO MENDEZ-POZO
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Hi, I am Gonzalo, a PhD. student from the Technical University of Madrid (Spain). I’ve come just for a few months to work with Jeff Rickel and, hopefully, learn about what all of you are doing here. So, if you don’t mind, I’ll show up in your offices to chat for a while (although you all look so busy!).

I decided to come to ISI because of the sun and the beach (sorry, Jeff), but, since I’m here, I’d better take advantage of Universal Studios, too.

I don’t have very specialized interests. On the contrary, I like to try a little of everything. Currently, I’m interested in development methods for Virtual Environments, but, as I say, that might change some time next week (or it may be some time in the next 3 years, since my thesis depends on that).

I’m working on the integration of STEVE, an intelligent tutor developed at ISI, and VRIMOR, a project supported by the European Union; its aim is to serve as a planning tool for maintenance operations in Nuclear Power Plants. If you’d like to learn more about that (or any other thing I can talk about), please drop by lab 950.

GREG KONDRAK
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I am a visiting scholar in the Natural Language Processing group of ISD for three months and also an assistant professor in the Department of Computing Science at the University of Alberta, Edmonton. I recently completed my Ph.D. degree in Computer Science at the University of Toronto.

I am interested in using modern NLP techniques for solving the problem of proto-language reconstruction from the vocabulary of related languages. I have proposed several algorithms that implement the principal steps of the comparative method of language reconstruction. They have applications that are not limited to diachronic phonology, but extend to other areas of computational linguistics, such as machine translation.

At ISI, I am working with Kevin Knight and Daniel Marcu on using cognates for improving translation models.

JASON FINLEY
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Hey there, Jason Finley here. I’m a California native and 5th year undergraduate at UCLA. I’ll be completing my B.S. in cognitive science this year, along with a minor in English and specialization in computing.

As an intern at ISI I’m working on the Social Intelligence project, under Dr. Lewis Johnson, which seeks to get the AI for the Virtual Factory (Continued on page 8)
Transonic and Adgen: Two New Projects in NLP

By Kevin Knight

Greetings, we have a couple of new natural language projects brought to you by Daniel Marcu and Kevin Knight. Actually, they are brought to you by DARPA and ARDA. Probably everybody knows about DARPA. ARDA is a DARPA-style agency that is organizing new research for the intelligence community. We also have a new graduate student from Turkey whose name is "Arda". He is a very nice guy who is office-mates with Philipp Koehn—please stop by and say hello. If there are other prospective graduate students named "Darpa", we are not opposed.

Our first project is called Transonic, and its goal is to build a two-way handheld translation system that works well for particular domains. For example, a doctor and patient who don't speak the same language should be able to use this device to communicate effectively.

You may have heard about a handheld translation system that was used in recent Afghanistan operations—it's true, the special forces are, like, totally down with machine translation. The main drawback to such systems is that they are "one-way", which means that an American can say something, and the machine can translate it into Pashto, and that's about it. (It's less about two-way conversation, and more about "drop the gun".)

On the other hand, doctors need to ask a lot of questions and get (sometimes) very detailed answers, and patients sometimes need to volunteer unsolicited information.

We are also working on the domains of refugee processing and force protection. This is a pretty hard unsolved problem—speech recognition has lots of errors, and machine translation has lots of errors!—but it's one with lots of military and commercial potential. We are collaborating with speech folks in the EE department, dialogue folks in the ICT, and hardware folks in linguistics at Hughes Research Labs in Malibu, hang ten.

Our other project is called Adgen: Advanced Generation for Question Answering. "Generation" is when a computer program creates a new piece of text that has never been uttered before. Generation has a distinguished history at ISI.

PENMAN was one of the first sentence-generation programs, and Nitrogen/Halogen was the first to integrate symbolic grammar with corpus statistics.

So what crazy thing are we up to now?

Well, now we want to create whole documents by machine. There are many applications for this—for example, a machine might want to integrate and summarize news on a particular topic from a wide range of news feeds around the world. Or, a machine might need to create a whole document just to answer a particular question asked by an intelligence analyst. Or, a machine might need to create a new biographical sketch of some bad guy. Doing this well will require solving many problems. One of those problems is text coherence, and that is the focus of Adgen.

If you took the sentences in the previous paragraph and changed their order, then the result would still have the same information, but it would be incoherent and impossible to understand. Text coherence is similar to grammar, but operates at the sentence level.

Grammar first: imagine that you take a sentence and, oops, you spill all the words onto the floor. If you assemble the words at random, you no longer have a grammatical sentence. However, if you know about grammar and meaning, then you can often carefully reconstruct the original sentence.

Interestingly, machines can also perform this reconstruction task after autonomously studying reams of online newspapers. The best thing about this ordering task is that we can constantly monitor the performance of our algorithms—how many scrambled sentences are reconstructed correctly by machine? 50%? 60%? 80%?

Likewise, if you take a text and scramble all the sentences, it is often possible to reconstruct the original text. For example, can you put these sentences back in order?

1. Terms weren't disclosed, but industry sources said the price was about $2.5 million.
2. Revlon is a cosmetics concern, and Beecham is a pharmaceutical concern.
3. Revlon Group Inc. said it completed the acquisition of the U.S. cosmetics business of Germaine Monteil Cosmetiques Corp., a unit of London-based Beecham Group PLC.
4. The sale includes the rights to Germaine Monteil in North and South America and in the Far East, as well as the worldwide rights to the Diane Von Furstenberg cosmetics and fragrance lines and U.S. distribution rights to Lancaster beauty products.

Sure you can, because you know what makes a text coherent. But the machine doesn't know yet, so we are teaching it. Fortunately, we have hundreds of thousands of positive instances of the concept.
ISI/ICT Researchers Attend “AAMAS” Conference

By Lynda Strand

Lewis Johnson, Stacy Marsella and Jeff Rickel represented ISI at the Autonomous Agents and Multi-Agent Systems (AAMAS) Conference held in Bologna, Italy, along with fellow ICT researchers Bill Swartout, Randy Hill, Jon Gratch and David Traum.

The conference was held July 15-19 at the University of Bologna and the Palazzo Re Enzo, a 13th century building (with a modern conference center).

Lewis Johnson co-chaired the conference, whose motto was "bringing people and agents together".

There were approximately 500 researchers in attendance, and USC tied with MIT for submitting the most research papers for the third consecutive year.

The ISI/ICT group looked at several new conference-featured intelligent agent software options available for driving virtual humans in MRE and other ICT scenarios.

Lewis Johnson organized a special surprise for the evening banquet’s entertainment, held in the Sala Podestà in the Palazzo Re Enzo. He engaged a local well-known pianist, Roberto Dionisi, who prepared a variety of pieces, including some famous opera arias.

Following Dionisi’s concert, without announcement or introduction, Lewis began singing the Prologue from Leoncavallo’s I Pagliacci. According to Lewis, the text of this aria is actually very relevant to the work of the ICT—it deals with the role of human emotion and feeling in dramatic performance. Vocally, it is one of the more challenging arias in the standard repertoire. His second piece was the American favorite, “Some Enchanted Evening” from Rogers and Hammerstein’s musical, South Pacific. The final piece of the set was “Non Piu Andrai” from The Marriage of Figaro.

Lewis stated, “Singing opera in Italian in Italy requires no small amount of courage. However I am pleased to say that both the music and the delivery of the language were well received.”

Lewis studied voice at the Yale School of Music and the Music Academy of the West. He also took private lessons at UCLA.

Lewis invites you see him in concert, in Camarillo, October 20th, where he will be performing Brahms’ Ein Deutsches Requiem, Opus 45 as a baritone soloist with the Ventura Master Chorale. See the Schedule of Events (page 3) for more information.

RAP Teams, Continued

(Continued from page 1)

nadhath, Paul Scerri, Sameera Poduri, Nathan Schurr, and Mei Si.

The key focus of the RAP Team at the present time is the development of an architecture for multi-agent cooperation that enables team members with different social skills to work together. While people have well-developed social skills that enable them to work effectively with others, agents and robots, in general, do not.

Our approach is to provide each RAP (robot, agent, or person) with an agent assistant (known as a proxy) that can coordinate with its assigned RAP and with the other team members. The team then becomes a team of RAP-proxy teams.

Coupling the team members with proxies ensures that all team members have certain minimum coordination capabilities.

The code name for our coordination architecture is Machinetta. We’ll leave it to the reader to guess the origin of this name, but will offer two hints: it builds upon Milind Tambe’s model of teamwork, and it is implemented in Java. Let Paul Scerri know if you think you have the answer.

The overall goal of this research is to build more social intelligence into agents and robots. Although it is often possible in well-structured team tasks for each team member, with a minimum of interaction with other team members, to focus on its individual responsibilities, team activities do not always decompose so neatly. Roles and responsibilities of team members may overlap, requiring negotiation and coordination.

Team members thus need to be sensitive to the goals, intentions and preferences of the other team members, and adapt their own behavior to be more compatible with that of their partners. This is true for agents working within large teams, as well as for intelligent assistants working for individual human users.

We therefore envision our work having broad impact on agent technology.
I have traveled a lot over the years (118 countries), often in adventurous ways—climbed the Matterhorn, drove a Land Rover from London to Cape-town, got attacked by a thousand people in Egypt, got stuck in quicksand in the interior of Iceland, flew in a Russian cargo plane to Timbuktu, followed orangutans around the Borneo rain forest, narrowly avoided being kidnapped in Yemen, etc. I take thousands of slides of my travels, give slide shows at the drop of a hat, and write up accounts of my more exotic travels.

I’ve recently moved to LA from the Bay Area to work at ISI, and I’m viewing the change as its own sort of exotic adventure.

**KATHY KURINSKY**
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Hi everyone! I am the newest Project Assistant to the Division, helping out Lewis Johnson, Stacy Marsella and Jeff Rickel.

I’m originally from Cleveland and came to Los Angeles almost a year ago (it’s hard to believe it’s been that long! I still feel like a fish out of water!)

Before moving out here, I had just graduated from Carnegie Mellon with a BA in Professional Writing and French. Please don’t ask me to speak French to you, though! It’s been a while, and I’m very out of practice.

At one point, I loved to travel. I still do, but now that I have my own budget that my parents aren’t contributing to, things are a little different! I’ve been to a few exotic places, though (India, most of Western Europe, Pittsburgh), and I have some great pictures to show for it.

When I’m not at work, I’m usually at home watching T.V. (I love dating and reality shows) or making some sort of craft. I also love trying new restaurants, so if you know of any good ones, let me know! Or just stop by and say hello!
MEI SI
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Hello! My name is Mei Si. I am a first year PhD student working with Lewis Johnson. Currently I am in the RAP team and doing interface design stuff. Before I came here, I studied at the University of Arizona, and earned a masters degree in computer science. I have another masters degree in Psychology, specialized in Human Factors from the University of Cincinnati. I am interested in areas that can combine knowledge from computer science and Human Factors together, such as Human Computer Interaction and interface design.

NICK MOTE
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Hi! I’m starting out this year as a PhD student, planning on specializing in NLP. Some of you who’ve been around for a while might recognize my face from a summer back when I was a visiting research intern under Kevin Knight (doing Chinese-English name transliteration stuff). My big-picture interest lies in machine translation, but for the year I’ll be doing research in chatterbots and working towards the cliché goal of passing the Turing test.

I was born in Southern California and have spent all of my life here aside from this last year, which I spent in Taipei, Taiwan (I figured that becoming good at a second language could give me a more intuitive feel for what I’m going to be programming). While I enjoyed the food and the culture greatly over the year (especially the food!), I could still feel America calling me back (most notably American weather and the chance to be researching again). I’ve been back for a little less than a month, so I’m still kind of adjusting to LA’s multiculturalism and its SUV/palm tree/freeway/yuppie shopping mall/consumerist culture. But the weather is good—I’m currently basking in this low humidity and (relative) lack of pollution.

Stop by my office to say hi, or drop me an e-mail. Since I’m pretty new at ISI, it’d be great to meet more people here! Knowing Jesus is probably my first interest in life, and programming is probably my second. I also have an addiction to good poetry (especially T.S. Eliot, Jorge Luis Borges, Jalaluddin Rumi, & Pablo Neruda) and enjoy tennis (though I haven’t played for a year now...do you know how hard it is to find an empty court in the middle of a city like Taipei?).

NING WANG
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Hi, this is Ning. I came from Hunan, China, a place known for "spicy" girls. I’ve been in Auburn, AL for 2 years for my MS degree. Auburn is a small but very beautiful town full of nice people. Now I am a PhD student at USC. I am working with Lewis Johnson and Erin Shaw. If you’d like to know more about me, feel free to drop by my office.

RATTAPOOM TUCHINDA
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Hi my name is Rattapoom. My nickname is Pipe. Thai people usually have nicknames, but please don’t confuse mine with a lead pipe because it’s not. I know where the good Thai food places are so drop by my office and ask me if you want to know about those places.

I received my BS and master degrees from MIT, and currently I’m working on my PhD with Prof. Knoblock. My interests are AI, Database, and Machine learning. My main hobby is reading. I like to read different kinds of books to get different mindsets and perspectives about things. Specifically, I like to read about psychology, economics, marketing, and investing.

Oh, and I like Krispy Creme!

(Continued on page 12)
Where in ISD?

Spooky Suspects!

Time to test out your detective skills again! Have you been paying attention to the strange things in your colleagues’ offices? See if you can identify where these strange and spooky creatures are from! (The answers are on page 12.)

Object 1

Object 2

Object 3

Object 4
Foul Play?

Rash of Student Disappearances Plagues ISD, Raises Fears

By Jay Modi

Marina del Rey, CA—A recent series of suspicious graduate student disappearances has raised fears throughout the graduate student community of the Information Sciences Institute's 9th floor.

"It is certainly very disturbing to me. Any one of us could be next," says area graduate student Deepak Ravichandran, whose NLP group has been the hardest hit. The list of missing students include Yaser Alonainaz, Kenji Yamada, Irene Geary and Sheila Tejada.

At the center of the disappearances seems to be ISD Professor Dr. Kevin Knight, who has had three of his students come up missing.

"I have no additional information about the whereabouts of these students beyond what I've already told authorities. Please refer any additional questions to my lawyer," Knight told reporters as he hurriedly walked to his car in the ISI parking garage.

Suspicions have circulated among the AI-Grads that the missing graduate students were abducted and taken to other universities and research institutions around the world, after it became clear that they would never leave ISI on their own volition. Yigal Arens, the director of ISD, denied such reports.

"These are all rumors and unsubstantiated allegations. ISD is a perfectly safe place for graduate students to work." Many students, however, remained unconvinced.

"We've seen students disappear from time to time in the past, but never anything quite like this," remarked a nervous grad student who wished to remain anonymous. "There has to be something going on. I mean, Kenji is missing for Pete's sake. He has been here forever...he would never leave voluntarily."

Adding to suspicions are the arrivals of new graduate students who have taken up the offices of the missing students.

Nick Mote, a new graduate student who has moved into the office of missing students Yaser and Irene, was unsure about the whole situation. "I don't know if they were abducted or not, but they sure left a lot of crap lying around," Mote said.

As the mystery deepens, the AI-Grads can do nothing but say farewell to their missing colleagues while welcoming the new students who have appeared to take their places.

Have you seen us? Two of the recently missing ISD graduate students.
Hi! My name is Shashi, and I am working with Kristina Lerman and Aram Galstyan on developing better games! It’s fun!

I’m from Bangalore, India and love the weather there. In LA, it hardly ever rains. Monsoon season in Bangalore is the most wonderful time of the year.

I would love to talk with you if you wanna kill some time. ISI is a wonderful place to be in, but for all its positive points, there’s a negative one too. There are a lot of smart people working here, who hardly ever interact with each other, both the students and the Research Scientists. I guess ISI is missing out on something really big. We’ve got to devise something to get these people together and talking often. Something like what Los Alamos was during the Manhattan project.

Like I said earlier, I would love to talk to you, but only if you are, to quote Freeman Dyson describing Richard Feynman, “half genius and half buffoon”. Else, it would be too boring. Please e-mail me at skolar@isi.edu

PS: Dyson later changed the description to “All Genius, All Buffoon”. But, that’s a bit too much to ask from you guys, right? By the way, I’m not half as good as you are, so don’t take it seriously.

My name is Stefan Decker, and I recently moved from Northern California where I was working at Stanford University, to Marina del Rey. With me came my wife—Birgit—and our two kids, Jana and Robin. All of them are starting to enjoy the life in Southern California (although we can confirm that it DOES rain here!).

At Stanford I was leading a project in the DARPA DAML Program—a DARPA program seeking to establish the Semantic Web—a web of machine understandable data, enabling intelligent agents to perform tasks for their users. My research interests are semi-structured data, ontologies, P2P systems, knowledge representation, web-standards and a mixture of all of the above ☺.

I grew up in the north-western part of Germany, close to the dutch border. I did my computer science undergraduate degree at the University of Kaiserslautern, a city famous for the largest US-American population outside the borders of the US, and a soccer team, the Red Devils, which was relegated from the first to the second league when we left Kaiserslautern. I did my PhD studies in Karlsruhe, which also had a first class soccer team—until we left for the US—then the team was also relegated to the second league (Is there a pattern? Since then I was not allowed back into Germany, and soccer players tend to avoid me (just kidding)).

My family is my biggest hobby (it seems this is the common fate of all people with kids), but besides playing with the kids I enjoy riding bikes and reading good(?) books. I’m glad to be at ISI—it is a great place to be, full of opportunities and I’m sure we will have lots of opportunities to explore them!
Congratulations to **David Pynadath** and **Milind Tambe**, who received the Best Paper Award at the Autonomous Agents and Multi-Agent System (AAMAS) Conference in Bologna, Italy! Their paper was entitled, “Multi-agent Team-work: Analyzing the Optimality and Complexity of Key Theories and Models.”

Congratulations to **Wei-Min Shen** and the Conro team for their paper entitled “On the Use of Sensors in Self-Reconfigurable Robots”. The team was awarded Best Paper at the Seventh International Conference on the Simulation of Adaptive Behavior (SAB’02), which was held in Edinburgh, Scotland.

**Kenji Yamada** finally defended his PhD thesis in May, after 8+ years at ISI! He has accepted a post-doc position at Xerox Research Center Europe in Grenoble, France and will start there in November. You can keep in touch with him at kyamada@alumni.usc.edu.

Congratulations to **Seong Rim Nam** and **Greg Barish** were married in Pleasanton, CA, on August 4th! They are planning to visit France and Italy on their honeymoon, in late September.

**Jafar Adibi** recently defended his thesis! But he hasn’t left us yet. Here’s what Jafar’s been up to since then...

“My main job is to make various slides for social programs, put people in the news and make them movie stars, comment on our very dynamic division activities, monitor the NLG group, chat with Jose Luis, advise AI grads how to get a window office, read Kevin’s office door notes, and to have lunch in the kitchen with the rest of the gang.

Besides that, I am a member of the KOJAK (Scalable Semantic Link Discovery via Integrated Knowledge-Based and Statistical Reasoning) project, working with Hans Chalupsky and Wei-Min Shen. The main goal of this project is to build a hybrid link discovery system that combines state-of-the-art knowledge representation and reasoning technology with statistical clustering and analysis techniques from the area of data mining. I work mostly on the data mining and statistical reasoning part.”

**Sheila Tejada**, who defended her PhD thesis and has accepted a position as Assistant Professor at the University of New Orleans.

**Yaser Alonaizan** accepted a position with IBM after he defended his PhD thesis. Good luck Yaser!

**Ion Muslea** successfully defended his PhD thesis on September 13. Congrats Ion! Ion is now putting the last touches on his thesis and getting ready for the "job search" phase of life.
With this assistance I will have time to devote to my newest interest: responding to unexpected events. I talked about this at the 30th anniversary event on September 9. Responding to unexpected events, natural or man-made, is one of the great challenges facing us today.

Fortunately, new developments in information technology and other areas make it possible to create policies, general infrastructure and capabilities that are adaptable instantly to any threat. During the coming months I will investigate new responses to unexpected events and ways to implement them.

So, some things are changing in ISD. With a little luck the result will be a better run, more exciting place, with interesting new opportunities for all!

"coherent text", from those same online newspapers. That means the machine can develop and test its own hypotheses about text coherence.

What the heck?!

Well, the ability to figure out which individual English words get together in which order has already revolutionized fields like speech recognition and machine translation. We expect that understanding how individual English sentences can reasonably get together will ultimately do the same to document creation in fields like summarization and question answering—plus, "what makes a text coherent" is a fascinating scientific question in its own right.

A number of people have already contributed to research in this area. I took that test myself and was able to reconstruct texts well by hand, and I could introspect about my own methods.

Keonhoe Cha has a baseline program that tells whether it thinks one sentence can reasonably follow another—this boils the sentence-ordering problem down to a kind of traveling salesman problem.

Chris Ackerman made some good improvements over the summer, and he also did some groovy Turing-test-like experiments where he asked whether it was possible for people to tell the difference between original articles and machine-reconstructed articles. (When it is no longer possible, then, hey, we are done!)

An exciting direction is whether machine A can tell the difference between original articles and articles reconstructed by the current-champion reconstructor machine B. In fact, we can build such a machine A, and Jonathan Graehl is looking at how to get the knowledge from A into B.

This kind of iterative research strategy is potentially very valuable in all areas of natural language processing.

Natural Language Projects, Continued

A Note from Ed Hovy

When I joined ISI in 1987, ISD was rather new, and not really a nationally well-known AI department. Today it has over 100 people, international recognition, and a lot of funding. So it's a bit scary to help manage the Division. Fortunately, Kary gave me one of the necessary tools: a blue hardcover book to write notes in. I already have the second: a mac. And I will make sure I get the third: a PalmPilot that beeps whenever a meeting runs too long.

The fourth—a head of silvery hair—I will just have to do without.

But I plan to help in various ways, especially two: looking out for projects that need funding and trying to open up new areas for the division, in particular multimedia HCI. If you have any specific ideas or know of people on the market, please let me know!

Erika Barragán-Nuñez is pregnant! She's expecting a baby girl at the beginning of November. Kary will be taking care of Erika's group while she is away.

Another growth in ISD...
After years of extensive research, I’ve concluded beyond any doubt that I need more grants!
We’re on the Web!
Check out a color version of the newsletter at:
www.isi.edu/~d3admin/insideronline