# Introduction of Professor Dennis E. Hayes

*remarks presented by Bill Menke at the Department Retirement Party*
September 12, 2008

My pleasure today is to say a few words about Dennis E. Hayes.

I'll begin with Denny as a leader in the Department of Earth and Environmental Sciences.

Denny holds an important record within DEES: the longest-serving Department Chair, being at the helm for a full decade. This is in contract to more-recent Chairs, such as Nick Christie-Blick, Mark Cane and me, who served but two-year terms – and were pretty relieved when that second June Thirtieth drew near.

Denny is also the only person, to date, to serve non-consecutive terms – five years from 1989 to 1994 and then again another five years from 1997 to 2002.

Every year I nominate Wally Broecker, who did a short stint as Department Chair way-back-when for a second term. It never works, except to provoke from Wally some rather colorful language and picturesque expressions. I wonder why.

It's fun to pose Denny's leadership in terms of records. But I would like to single out what I consider Denny's most important accomplishment as Chair. Denny set for us the standard for representing the Department – and more broadly the Lamont community as a whole - to the rest of the University.

Did you know that Columbia University has seven language departments? East Asian, French, Germanic, Italian, Middle Eastern, Slavic, and Spanish - Portuguese. In aggregate, in terms of faculty, they're four times as large as Earth and Environmental Sciences. Though we Earth Scientists might not be aware, they have their own superb scholarship, their own agenda, their own pressing needs for resources and their own advocates amongst the Administration. To trivialize them or anyone else in this university is to become a pariah. And, of course, such an attitude is counterproductive when it comes to obtaining resources in a system where allocation of every resource is highly contested.

Denny's approach balanced the firm articulation of our own achievements, agenda and needs, with respect for the points of view of folk from both the

humanities and the other sciences. His personal integrity and willingness to participate in serious dialog have gone a long way towards giving the rest of the University the sense that we are all working together for the common good.

Denny's 1994 term as Chair of the Executive Committee of the Faculty of Arts and Sciences, which is the governing body of the ensemble of Departments, is a sign of the degree of respect that he was held by faculy from all the Departments of the University.

But enough now of administration. I turn to science.

Did you know that Denny started out as an engineer? In 1961 he earned an undergraduate degree in Geological Engineering from the University of Kansas.

Denny's first two papers, written in the 1960's when he was a graduate student here at Lamont, and both published in JGR, did indeed have titles with an engineering sound to them:

"Tests on the 1962 model of the Anschutz Gyrotable" with Joe Worzel and Harmut Karnick and

"Continuous Analog Computation and Recording of Cross-coupling and Off-level Errors" with Manik Talwani and Bill Early

Both of these papers had to do with the technology of marine gravity measurements.

But those were the only two such papers. Denny soon became caught up in the excitement of the era of plate tectonics, and particularly deducing the tectonic configuration and history of each of a multitude of features on the ocean floor. It was this far-roving discovery that has absorbed him ever since.

Thirty-two years ago, when I first arrived at Lamont, a second-year graduate student named Dallas Abbott – one of Denny's advisees - took me on a little tour of 'Sub Topo', Denny's lab on the third floor of the oceanography building. This was a room where very surface was covered in maps, many of which were indeed maps of Submarine Topography, as the room's nickname implied.

Maps on the walls. Maps on the tables. Cabinets with wide but shallow draws full of maps. Paper tubes, piled up in the corners, containing rolled-up maps.

Very few of these were colorful, the sort you could buy at a store. Most were just black ink on big meter-square sheets of translucent white paper and were drawn by hand right in that room or slowly plotted by a 1970-vintage computer in a room on the floor below. Some were contour maps that had a fairly uniform texture, but most displayed data along ship tracks, and those had a more chaotic appearance, with some regions that were completely blank – unexplored regions of the world – and other regions that were a tangle of overlapping lines.

A purist would say that these maps were not so different than the ones that we use today, and I suppose that they would be right. Yet they were magic, hypnotic to me in a way that no map can be to me today, if only because I am different from what I was those many years ago. Dallas excitedly pointed out to me a big jaggy on her own map as the Prince Edward Fracture Zone. Sure, I had heard of fracture zones, even seen them in the physiographic drawings that Marie Tharp and Bruce Heezen had published in National Geographic. But until I looked at Dallas' map, I had never appreciated just how big a fracture zone scarp really was.

Denny and all his graduate students were enthralled with these maps and the tectonic processes that were occurring with the portions of the earth that they represented. Just as the room was full of maps, it was full of students.

Dallas, herself, making a map of the Southwest Indian Ridge;

Bob Jacobi, mapping sediment slides in Newfoundland;

Cary Mrozowshi, mapping the Philippine plate;

Steve Louis, mapping trenches and microplates in the Philippine archipelago;

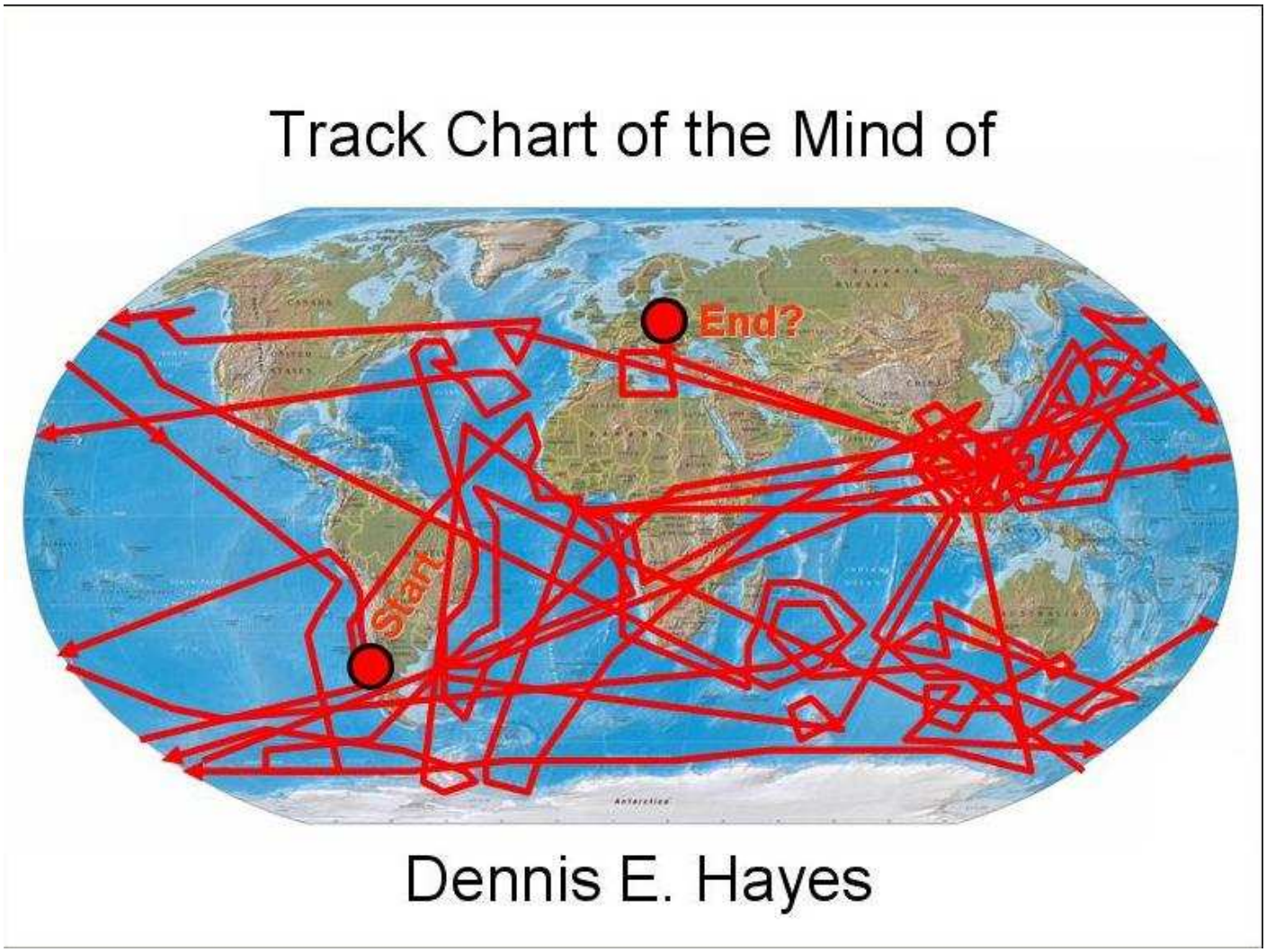
and Brian Taylor, mapping the South China Sea and

and over in one corner, at an especially well-equipped drafting table, sat Dave Johnson, an artist and draftsperson, who was preparing publication-quality maps.

This was the heart of Denny's life here at Lamont and the heart of the scientific contributions that he has made. There is hardly a patch of the ocean floors whose tectonics and history Denny and his students did not elucidate. And by the way, Denny has successfully seen 25 students through completion of their PhD's.

I looked through the list of Denny's 143 peer-reviewed papers yesterday, intending at first to single out a few to highlight. There are indeed highlights there. But I found myself instead thinking just how far-roving Denny efforts have been. I'm almost speechless. So instead of singling any of these 143 papers out, I leave you with this ..

In the spirit of Lamont and the old Sub Topo Lab, a track-chart of Denny's mind:




The chart starts with his thesis on the Peru-Chile Trench, and then does pretty well in covering the world ocean floor. It goes as far south as the Antarctica Peninsula and the icy Ross Sea, and has quite a tangle of activity in the vicinity of the Philippines, Marianas and South China Sea. It ends – for now, but who among us believes this is really the end – with Denny heading into the waters of the Mediterranean Sea.

Denny, I congratulate you and invite you to share a few comments.