Practical TeX 2004 — program and information

Sunday July 18	3–5 pm *registration*	
	5–7 pm *reception*	

■ **Track 2: Introduction to LaTeX class.** Starting at 10:30 am Monday, and 9 am Tuesday and Wednesday, and ending at lunchtime each day, Sue DeMeritt and Cheryl Ponchin will teach a continuing class on beginning and intermediate LaTeX, with no prerequisites. Participants can choose whether to attend this class or the morning talks.

■ **Mac OS X & TeX session.** Starting at lunch time Monday and continuing into the afternoon, a round-table discussion on Mac OS X will be held in the Napa room, led by Hans Hagen, Wendy McKay, and Ernest Prabhakar from Apple.

Monday July 19	9 am Karl Berry, TeX Users Group	*Welcome*
	9:15 am Peter Flynn, Silmaril Consultants	*Keynote address: TeX and the interface*
	10:15 am *break*	
	10:30 am Eitan Gurari, Ohio State University	*TeX4ht: HTML production*
	11:15 am Kaveh Bazargan, River Valley Technologies	*LaTeX to MathML and back: A case study of Elsevier journals*
	11:45 pm Hans Hagen, NTG, Pragma ADE	*The pros and cons of PDF*
	12:30 pm *lunch*	
	2:00 pm Jenny Levine, Duke University Press	*Label replacement in graphics*
	2:30 pm David Allen, University of Kentucky	*Screen presentations, manuscripts, and posters from the same LaTeX source*
	3:15 pm *break*	
	3:30 pm Baden Hughes, University of Melbourne	*TeX and XML*
	4 pm Hàn Thế Thành, University of Education, Ho Chi Minh City	*Micro-typographic extensions of pdfTeX in practice*
	4:45 pm q & a	*moderator: Lance Carnes*

Tuesday July 20	9 am Volker R.W. Schaa, Dante e.V.	*pdfTeX and XML workflow for conference proceedings*
	9:45 am Anita Schwartz, University of Delaware	*Paperless dissertations at the University of Delaware*
	10:30 am *break*	
	10:45 am Hans Hagen	*MetaPost: More than math and fonts*
	11:45 am Brooks Moses, Stanford University	*MetaPlot, MetaContour, and other collaborations with MetaPost*
	12:30 pm *lunch*	
	1:30 pm Cheryl Ponchin, Ctr. for Comm. Research	*LaTeX survey*
	2:15 pm Steve Grathwohl, Duke University Press	*What is ConTeXt, that we should be mindful of it?*
	3 pm *break*	
	3:15 pm William Richter, Texas Life Insurance Co.	*TeX and scripting languages*
	4 pm q & a	*moderator: Karl Berry*
	social events (see next page)	
	5 pm *treasure hunt*	
	7:30 pm *banquet*	

Wednesday July 21	9 am Nelson Beebe, University of Utah	*A bibliographer's toolbox*
	9:45 am David Jones, American Mathematical Soc.	*The amsrefs package*
	10:30 am *break*	
	10:45 am Steve Peter, Beech Stave Press	*TeX and linguistics*
	11:30 am Hans Hagen	*ConTeXt*
	12:30 pm *lunch*	
	1:30 pm Steve Grathwohl	*70 years of the Duke Mathematical Journal online*
	2:15 pm q & a	*moderator: Baden Hughes*
	3 pm *break*	
	3:15 pm panel: Digital Publishing	*moderator: Lance Carnes; Kaveh Bazargan, Karl Berry, Peter Flynn, David Fuchs, Hans Hagen.*
	4 pm *end*	

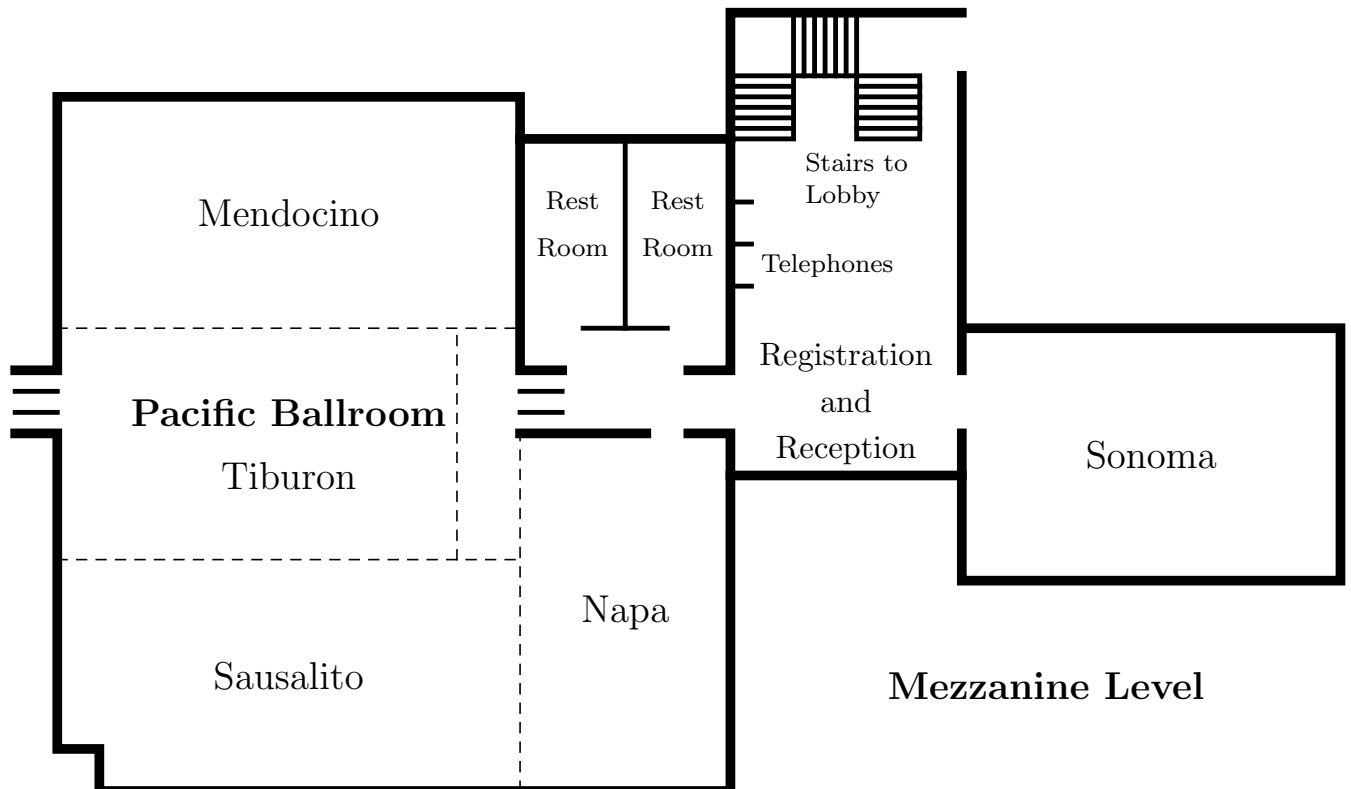|		
Thursday July 22	**additional courses**	
	Peter Flynn	*Practical TeX on the Web*
	Sue DeMeritt, Cheryl Ponchin	*Intermediate and Advanced LaTeX*
	Hans Hagen	*Introduction to ConTeXt*

Treasure hunt

After the conference sessions on Tuesday, Lance Carnes will host a treasure hunt in San Francisco North Beach/Chinatown. Armed with clues, a street map, and keen problem solving ability, treasure hunt teams will look for eight solutions, starting at the conference hotel. The clues will lead hunters to landmarks, pubs, historic and notorious places. The solutions are a place name, a detail from a historic plaque, or some other minutiae. The winning teams will be the ones who arrive at the banquet restaurant at the end of the hunt with the most correct answers in the least amount of time. More information on a separate page near the end of this booklet.

Banquet

At 7:30 pm Tuesday, the conference will hold a banquet at the Empress of China restaurant. This will be a multi-course Chinese dinner, including Sizzling Rice Soup, Peking Duck, Manchurian Beef, and Walnut Prawns. The banquet room has a commanding view of downtown San Francisco, Alcatraz and the bay, and Telegraph Hill. Several celebrity TEX guests will be attending the banquet!

Conference logistics

- Registration is in the 'reception and pre-function area' at the top of the stairs, Sunday 3–5 pm. Please come and pick up your name tag, conference information, and other goodies at this time if possible. Otherwise, see Robin Laakso to register.
- The reception is in the same area, Sunday evening 5 pm–7 pm.
- Lunches will be served in the Bristol Bar Grill, downstairs off the lobby. This hotel restaurant is open to the public for breakfast and dinner but reserved for our group for lunch.
- Breaks will be served in the reception area.
- The main conference sessions are in the combined Mendocino/Tiburon space.
- The Track 2 introductory LATEX class is in Sausalito, starting Monday 10:30 am and Tuesday, Wednesday 9 am, and ending at lunch time.
- The Mac OS X session is in Napa, starting Monday lunchtime.
- Internet access is available in Sonoma, ≈ 7:30 am–9 pm. See Robin Laakso for emergency access outside regular hours. General wireless access is available throughout the conference area and lobby.
- Thursday classes will be held in Tiburon, Sausalito, and Mendocino.

Mendocino

Rest Room

Rest Room

Stairs to Lobby

Telephones

Registration and Reception

Pacific Ballroom

Tiburon

Sonoma

Napa

Sausalito

Mezzanine Level

PracTeX Treasure Hunt

Tuesday, July 20, ≈ 5–7:30 pm

How does it work?

First, form a team of 3–6 people. You can assemble a team prior to the conference, or join a team the evening of the hunt. Some clues may require knowledge of American idioms, while other clues can be solved with keen observation and logic. All participants, whether from the US or abroad, can play a role in solving clues.
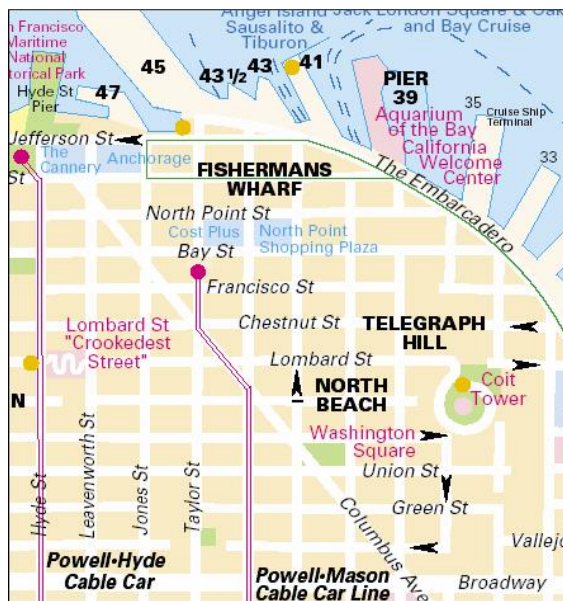
The hunt begins at the Holiday Inn. You will be given a set of clues, a map, and an answer sheet. You may solve the clues in any order; it's best to try to figure out the locations before setting out on foot, to avoid backtracking.

The clues will lead you to a location, and from there you look for the solution. In most cases, you will have to get to a location before the rest of the clue makes sense.

You have a maximum of two hours for the hunt. You may not be able to solve all the clues in that time, so if you cannot get the solution within a few minutes, move on to the next clue. Submit answers at the banquet restaurant (Empress of China) before the designated ending time (≈ 7:30).

Sample clues

The first part of a clue guides you to the location. The other part of the clue can only be solved once you are at the location. The location part of these sample clues can be solved by referring to the map, along with some shrewd reasoning. Since the answer to the clue can be solved only when you are at the location, for now see if you can find the locations for these clues. Answers are below. (The Holiday Inn is at the corner of Columbus Ave. and North Point St.)

Sample Clue 1. *Roman* seamen will think of this landing place as XXXIX. To the west hundreds of sea creatures have made their home where sailboats once berthed. What are these creatures that have a name like the TeX mascot, but whose cry is like a dog's?

Sample Clue 2. At the corner where a *15th century sailor* crosses a small *body of water*, this place's name includes circular items which have become smaller in size over the past 20 years, yet their price has certainly not shrunk.

Rules

The hunt is best when all team members contribute. Teams must collaborate in solving the clues and must stay together at all times. Individuals may not leave the team and solve clues on their own.

You must travel on foot. All team members must be willing to travel at the same pace, so consider this when joining a team.

All team members must be present when the answers are submitted at the end of the hunt.

The solutions to the clues will be distributed after the hunt. The top three teams will receive prizes (not to mention bragging rights).

Acknowledgments

The PracTeX Treasure Hunt is based on the popular Chinese New Year Treasure Hunt created by Jayson Wechter.

Answers

- Answer to Sample Clue 1: The place is **Pier 39** (we're assuming Roman seamen think in roman numerals). Next to this pier are floating berths that have become a permanent home to **sea lions**.
- Answer to Sample Clue 2: The corner is **Columbus** (15th century sailor) and **Bay** (small body of water), and the place is **Tower Records** (which once sold vinyl records but now sells CD's).

LaTeX to MathML and back: A case study of Elsevier journals

Kaveh Bazargan

Our main business is typesetting and content management for mathematical journals. One of our clients is Elsevier. As of this year, all of their journals will be archived in XML, with mathematics in MathML. In this presentation I will outline and give a live demonstration of how we tackled the automatic conversion between LaTeX and MathML. This has led to a workflow which we have standardized for all journals we handle.

A bibliographer's toolbox

Nelson Beebe

This article surveys a portion of a set of software tools that I have developed over the last decade for the production, maintenance, testing, and validation of very large bibliographic archives. It provides resource locations for all them, and shows how they can make bibliography preparation and maintenance more productive, and much more reliable.

TeX and the interface

Peter Flynn

TeX systems have been a cornerstone of research and academic publishing for a long time. Development of how it interfaces with different classes of user or potential user, however, has been uneven. Recent developments in other areas of text processing are opening up new opportunities for TeX-based systems. Should TeX development become involved in these areas, or should it be restricted to those areas where it has traditionally been a strong player?

What is ConTeXt, that we should be mindful of it?

Steve Grathwohl

ConTeXt can not only be considered a LaTeX for the 21st century, but, more generally, an evolving platform for document engineering, if we take a very expansive view of what constitutes a 'document'. But in this presentation I want to cover how ConTeXt handles some document features with which we are all familiar. In order to demonstrate ConTeXt's powerful and intuitive key-value setups for document structures, I will then show how I implemented a simple book design, a type of project I always undertake when trying to learn a new system. The book is *A Voyage to Arcturus* by David Lindsay.

70 years of the Duke Mathematical Journal

Steve Grathwohl

The *Duke Mathematical Journal* published its first issue in 1935. Since the 1980s, it has been one of the leading independent general mathematics journals. Over the last year, we at Duke have finished putting the entire corpus on the World Wide Web, in appropriately indexed and searchable form. I give in this presentation a short overview of DMJ Online, which is hosted by Project Euclid at Cornell University, and make a few remarks about the management of metadata for the project, which involves an intersection of the TeX and XML worlds mediated by Perl.

TeX4ht: HTML production

Eitan Gurari

TeX4ht is a highly configurable system for producing hypertext from TeX-based sources. The system is distributed with a large set of configuration files. The most commonly used configurations are those supporting LaTeX inputs and HTML, MathML, OpenOffice, and DocBook targets. The first part of the presentation will describe how the system can be used for different applications.

ConTeXt is a new addition to the style files being supported by TeX4ht. The second part of the presentation will describe the work done to provide TeX4ht configurations for ConTeXt, with the objective of providing insight into the inner working of TeX4ht.

How to use micro-typographic extensions of pdfTeX in practice

Hàn Thế Thành

Micro-typographic extensions of pdftex like margin kerning and font expansion have been around for a while. While the demos show interesting results, applying those extensions to daily use is not that simple for an average user. In this article I will share some experiences in using those extensions in practice, and give a few simple and useful recommendations for a quick start for newcomers.

TeX and XML
Baden Hughes

With the growing prevalence of XML data, it is logical to consider ways in which XML and processing engines such as TeX can be integrated efficiently to produce high quality typographic output. In this session, we will first review the history of approaches to the integration of TeX with other structured data types; and motivate the work here by considering a range of typical use cases. Adopting a typological approach, we will consider: XML in TeX documents; XML as input to TeX processes; XML as output from TeX processes; and XML as an intermediary between other processes and TeX itself. we conclude with a review of the state of the art of TeX and XML integration, and a survey of current directions.

The `amsrefs` package
David Jones

The `amsrefs` LaTeX package extends the benefits of BibTeX's structural markup to all stages of a document's life cycle while simultaneously ameliorating a large class of problems that frequently plague BibTeX users. Using `amsrefs`—either in conjunction with BibTeX or independently of it—an author can easily create a self-contained LaTeX file that retains all the semantic information that is typically lost when converting BibTeX database records into LaTeX source code, making it easier, for example, to reuse LaTeX documents in other contexts, such as on the Web. At the same time, issues such as non-Latin characters in names and capitalization of titles are supported more naturally, eliminating the need for many of the special markup conventions of BibTeX databases that trip up authors.

The `amsrefs` package is compatible with the `hyperref` and `showkeys` packages and provides support for sorted and compressed citation lists (à la the `citesort` and `cite` packages) and multiple bibliographies. It can also emulate the standard `plain`, `abbrv`, `alpha` and `unsrt` BibTeX styles, and supports a rich set of author-year citation schemes.

This talk will demonstrate how to use `amsrefs` to solve common problems and compare and contrast `amsrefs` with existing solutions.

Label replacement in graphics
Jenny Levine

In this presentation I show how graphics are manipulated to the *Duke Mathematical Journal* style. I give some examples and a step-by-step approach to assessing a figure file, removing its labels, and placing new ones using `graphicx` and `overpic`.

This is done to maintain a consistent style. Our labels should be in a compatible font and match the look of the journal as well as that of the article (size, placement, emphasis, etc.).

Paperless dissertations at the University of Delaware
Anita Schwartz

The Office of Graduate studies at the University of Delaware decided to do their part in meeting our campus goal of a paperless environment by registering with UMI ProQuest as one of the first test universities to allow electronic submissions of dissertations. This means no more binding hard copies, only PDF (Portable Document Format) files. Eventually we plan to includes theses, so we must make this first phase of the project a success. We choose to use the service at UMI because it fit well into our current campus requirements for UDThesis and it would require very little technical support. The plan is to go live in September 2004. This paper will briefly describe our current environment and the necssary steps to support UDThesis in our future environment. The primary goal of this paper will explain our support issues for the software aplications (Word, TeX and LaTeX) used to generate theses and dissertations and options for generating a PDF file.

The overall goal of this project is to provide an enjoyable and successful experience for our graduate students and at the same time fulfill our campus goal of being a paperless environment.