

A Visual Tour of Andrew

Snapshots of the Andrew system,
a campus-wide computing network,
a joint venture between IBM and
Carnegie Mellon University.

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Pittsburgh, Pennsylvania
11.9.89

A Visual Tour of Andrew

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Notes on the following pages:







1. The opening screen for Andrew.
2. The default arrangement of windows and columns. The console window (upper left) indicates that I have 7 new pieces of mail. I invoke the **Messages** program by selecting *Read Mail* or *Read News* from the pop-up menus. I can also type **messages** in the typescript window, if I prefer.
3. **Messages:** default presentation of folders that I'm subscribed to, content titles of one selected folder, and the contents of one selected message. Icons in the middle panel indicate new mail and seen (saved) mail. Selection of a title or a folder is indicated with bold type.
4. **Messages:** I can delete a message by selecting it and using the menus.
5. **Messages:** the deleted message is indicated in the middle panel with a smaller point size and a "grey" mail icon. I now want to compose and mail a reply to the sender of a particular note, so I select *Reply to Sender* from the menus.
6. **Messages:** the Send Message window with the address information automatically filled in. With the reply completed, I select *Send/Post* from the menus. The program verifies addresses, then sends the message. The window's title bar and the message area below the window will indicate when a message has been posted.
7. **Messages:** because I had previously instructed it, the Send Message window automatically hides itself after posting the note. The Messages window then reformats itself to fill in the entire right-hand column. (If I had to hide the SendMessage window by hand, the Messages window would not reformat itself. It would remain in position, unchanged.) Here, I'm reviewing the contents of another folder, this one a bulletin board. As with mail, icons are used to indicate the difference between "new" and "seen" postings.
8. **Messages:** I can print out the contents of a particular posting by selecting it and using the menus.
9. The **Console** window now indicates that there is one document waiting to be printed. A new window has been created in the right column, this one called *ez*, which is the editor for text and multi-media documents.
10. **ez:** I can preview my document before sending it to the printer.
11. **ez:** this preview window shows me exactly how the document will look when printed. From there, I can print the document by using the menus.
12. The printed page from a laser printer.
13. Displaying a raster image is possible in one of the bulletin boards. Andrew allows the user to scan in an image and imbed it in a document or display it behind windows (see some of the next pages).
- 14-19. Sample screens collected on a walk through several public Andrew clusters. Most of the users represented here were Computer Science or Engineering students, those very familiar with the system and who knew how (and wanted) to customize their working environments. In general, students in other majors tended to keep the default Andrew settings and went about their work. Page 18 has the new Motif interface, running on X.

Welcome To

Andrew

*An experimental system produced by
the Information Technology Center,
a joint project of CMU and IBM.*






console ShowSeconds [7.4] parnassus





Load		Monday 10/9/89
	   	7

typescript parnassus

dan 1 %

- Mail/News
- Read Mail**
- Read News
- Send Message
- Send Comment
- Search

console		ShowSeconds [7.4]	parnassus	messages	6 Changed Folders	parnassus
Load		Monday 10/3/89		<input checked="" type="checkbox"/> mail (Mail; 177 new of 398)		
				<input checked="" type="checkbox"/> official.andrew (Has New Messages)		
Snapshot stored in file /tmp/snapshot-1 (1:35:51 PM)				<input checked="" type="checkbox"/> official.cmu-news (Has New Messages)		
				<input checked="" type="checkbox"/> org.itc (Has New Messages)		
typescript				<input checked="" type="checkbox"/> 4-Oct-89 <i>Forwarded Note</i> - security%pghvm1@vm1.itc. (1442) <input checked="" type="checkbox"/> 4-Oct-89 <i>Diacou visit</i> - Jim Morris (254+0) <input checked="" type="checkbox"/> 4-Oct-89 <i>Pictures and Icons</i> - L 522-4394 KERRL@vm1.itc (2429) <input checked="" type="checkbox"/> 5-Oct-89 <i>Re: Icons: Cross-linguistic..</i> - Gary Corby@uunet.UU.NET (608) <input type="checkbox"/> 5-Oct-89 <i>Work Plan for October</i> - -> Maria Wadlow@andrew (713+0) <input type="checkbox"/> 5-Oct-89 <i>pset 1</i> - Jonathan B. Stigelman (111) <input type="checkbox"/> 6-Oct-89 <i>NO SUBJECT</i> .. - L 522-4394 KERRL@vm1.itc (1929) <input type="checkbox"/> 6-Oct-89 <i>Allan i Harris</i> - Jim Morris (958+0) <input type="checkbox"/> 7-Oct-89 <i>PO/PT</i> - LESLIE at AUSVM1@vm1.itc (756) <input type="checkbox"/> 7-Oct-89 <i>Returned mail: Cannot send ..</i> - Mail D. Subsystem@??? (1169) <input type="checkbox"/> 9-Oct-89 <i>Re: Icons: Cross-linguistic..</i> - George Leach@pdn.paradyn (1943)		
dan 1 % messages Starting messages (Version 7.11, ATK 12.2), please wait... dan 2 % ^				Date: Thu, 5 Oct 89 13:52:00 est From: munnari!softway.sw.oz.au!gary@uunet.UU.NET (Gary Corby) To: dan+@andrew.cmu.edu Subject: Re: Icons: Cross-linguistic Discussion Newsgroups: comp.cog-eng References: <I2_BVdm00Uk5M_dUQv@andrew.cmu.edu> In comp.cog-eng you write: >Before I send them out, though, I want to check with those of you who >addressed this topic on this b-board, and find out if you have any >objections to my doing this. All the printed posts are identified with >your names and addresses. Go right ahead. I'd be interested to hear of any comments. Could you post any to the group please? >I'd appreciate a response by the end of his week, if at all possible.		
Checkpointing message server state... done.						

console		ShowSeconds [7.4]	parnassus	messages	6 Changed Folders	parnassus
Load		Monday 10/3/89				
Snapshot stored in file /tmp/snapshot-1 (1:35:51 PM) Snapshot stored in file /tmp/snapshot-2 (1:41:08 PM)			<input checked="" type="checkbox"/> mail (Mail; 177 new of 398) <input checked="" type="checkbox"/> official.andrew (Has New Messages) <input checked="" type="checkbox"/> official.cmu-news (Has New Messages) <input checked="" type="checkbox"/> org.itc (Has New Messages)			
typescript			parnassus			
dan 1 % messages Starting messages (Version 7.11, ATK 12.2), please wait... dan 2 % printsnap /tmp/snapshot-1 print: warning: scale switch (X) ignored. print: snapshot-1 being queued on printer dogwood dan 3 % printsnap /tmp/snapshot-2 print: warning: scale switch (X) ignored. print: snapshot-2 being queued on printer dogwood dan 4 %			<input checked="" type="checkbox"/> 4-Oct-89 Forwarded Note - security%pghvm1@vm1.itc. (1442) <input checked="" type="checkbox"/> 4-Oct-89 Diacou visit - Jim Morris (254+0) <input checked="" type="checkbox"/> 4-Oct-89 Pictures and Icons - L 522-4394 KERRL@vm1.itc (2429) <input checked="" type="checkbox"/> 5-Oct-89 Re: Icons: Cross-linguistic.. - Gary Corby@uunet.UU.NET (608) <input checked="" type="checkbox"/> 5-Oct-89 Work Plan for October - => Maria Wadlow"@andrew (713+0) <input checked="" type="checkbox"/> 5-Oct-89 pset 1 - Jonathan B. Stigelman (111) <input checked="" type="checkbox"/> 6-Oct-89 NO SUBJECT .. - L 522-4394 KERRL@vm1.itc (1929) <input checked="" type="checkbox"/> 6-Oct-89 Allan i Harris - Jim Morris (958+0) <input checked="" type="checkbox"/> 7-Oct-89 POI/PT - LESLIE at AUSVM1@vm1.itc (756) <input checked="" type="checkbox"/> 7-Oct-89 Returned mail: Cannot send .. - Mail D. Subsystem@??? (1169) <input checked="" type="checkbox"/> 9-Oct-89 Re: Icons: Cross-linguistic.. - George Leach@pdn.paradyn (1943)			
			Date: Fri, 6 Oct 89 16:28:07 -0400 (EDT) From: Jim Morris <jhm+@andrew.cmu.edu> To: Peter Lucas <plucas+@andrew.cmu.edu>, "Joseph M. Ballay" <jb9p+@andrew.cmu.edu>, "Roy D. McKelvey" <rm0n+@andrew.cmu.edu>, Dan Boyarski <dan+@andrew.cmu.edu> Subject: Allan i Harris Cc:			
			I visited him today. He owns a six-person Advertising/Marketing that used Macintoshes for everything. They have a subsidiary, Task spreading the Mac culture in some of the ways Diacou is considering classes, consulting, etc. He is also getting into multi-media demonstrations			
			1. I'm introducing him to Diacou next week as the best possibility for someone to operate the Pittsburgh Design Lab -- better him than us.			
			2. He would be delighted to have the same sort of connection to CMU that Alec is pursuing -- access to students and knowledge about emerging graphics technology. He hasn't contemplated paying for this,			
Checkpointing message server state... done.						

Other

Message Folders

File Into...

This Message

Search/Spell

Delete





Reply to Sender


Reply to All






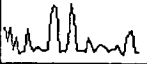
Read Mail

Send/Post Message

Quit

console		ShowSeconds [7.4]	parnassus	messages	6 Changed Folders	parnassus
Load		Monday 10/9/89	  	<input checked="" type="checkbox"/> mail (Mail; 177 new of 398) <input checked="" type="checkbox"/> official.andrew (Has New Messages) <input checked="" type="checkbox"/> official.cmu-news (Has New Messages) <input checked="" type="checkbox"/> org.its (Has New Messages)		
Snapshot stored in file /tmp/snapshot-1 { 1:35:51 PM } Snapshot stored in file /tmp/snapshot-2 { 1:41:08 PM } Snapshot stored in file /tmp/snapshot-3 { 1:44:45 PM }						
typescript		parnassus				
<pre> dan 1 * messages Starting messages (Version 7.11, ATK 12.2), please wait... dan 2 * printsnap /tmp/snapshot-1 print: warning: scale switch (X) ignored. print: snapshot-1 being queued on printer dogwood dan 3 * printsnap /tmp/snapshot-2 print: warning: scale switch (X) ignored. print: snapshot-2 being queued on printer dogwood dan 4 * printsnap /tmp/snapshot-3 print: warning: scale switch (X) ignored. print: snapshot-3 being queued on printer dogwood dan 5 * </pre>		<ul style="list-style-type: none"> <input checked="" type="checkbox"/> 4-Oct-89 <i>Forwarded Note</i> - security%pghvm1@vm1.its. (1442) <input checked="" type="checkbox"/> 4-Oct-89 <i>Diacou visit</i> - Jim Morris (254+0) <input checked="" type="checkbox"/> 4-Oct-89 <i>Pictures and Icons</i> - L 522-4394 KERRL@vm1.its (2429) <input checked="" type="checkbox"/> 5-Oct-89 <i>Re: Icons: Cross-linguistic..</i> - Gary Corby@uunet.UU.NET (608) <input checked="" type="checkbox"/> 5-Oct-89 <i>Work Plan for October</i> - => Maria Wadlow@andrew (713+0) <input checked="" type="checkbox"/> 5-Oct-89 <i>pset 1</i> - Jonathan B. Stigelman (111) <input checked="" type="checkbox"/> 6-Oct-89 <i>NO SUBJECT</i> .. - L 522-4394 KERRL@vm1.its (1929) <input checked="" type="checkbox"/> 6-Oct-89 <i>Allan Harris</i> - Jim Morris (958+0) <input checked="" type="checkbox"/> 7-Oct-89 <i>PO/1PT</i> - LESLIE at AUSVM1@vm1.its (756) <input checked="" type="checkbox"/> 7-Oct-89 <i>Returned mail: Cannot send ..</i> - Mail D. Subsystem@??? (1169) <input checked="" type="checkbox"/> 9-Oct-89 <i>Re: Icons: Cross-linguistic..</i> - George Leach@pdn.paradyn (1943) 				
		<p>I'm aware of the CHI conferences, but I only have the 1988 ones. I also know about many of the journals such as International Man/Machine Studies, Human Factors, etc..... Unfortunately, the literature is heavily skewed towards the IEEE hardware type journals, and we are now working closely with a bunch from Bell Labs, so I can't get their library.</p> <p>I was wondering if (1) if you either have published anything at CMU TR or do you know any such TRs on visual communication and I've got Bertin's "Semiology of Graphics", but I want more.....</p> <p>Any ideas?</p> <p>Thanks,</p> <p>George</p> <p>--</p>				
		<div style="border: 1px solid black; padding: 5px;"> <p>Other</p> <ul style="list-style-type: none"> Message Folders File Into... This Message Search/Spell <ul style="list-style-type: none"> <input type="radio"/> Delete <input checked="" type="radio"/> Reply to Sender <input type="radio"/> Reply to All <input type="radio"/> Read Mail <input type="radio"/> Send/Post Message <input type="radio"/> Quit </div>				
Checkpointing message server state... done.						

console		ShowSeconds [7.4]	parnassus	messages	6 Changed Folders	parnassus
Load		Monday 10/9/89		<input checked="" type="checkbox"/> mail (Mail; 177 new of 398) <input checked="" type="checkbox"/> official.andrew (Has New Messages) <input checked="" type="checkbox"/> official.cmu-news (Has New Messages) <input checked="" type="checkbox"/> org.etc (Has New Messages)		
Snapshot stored in file /tmp/snapshot-1 (1:35:51 PM) Snapshot stored in file /tmp/snapshot-2 (1:41:08 PM) Snapshot stored in file /tmp/snapshot-3 (1:44:45 PM) Snapshot stored in file /tmp/snapshot-4 (1:49:49 PM)				<input checked="" type="checkbox"/> 7-Oct-89 PO/PT - LESLIE at AUSVM1@vm1.etc (756) <input checked="" type="checkbox"/> 7-Oct-89 Returned mail: Cannot send... - Mail D. Subsystem@M (1169) <input checked="" type="checkbox"/> 9-Oct-89 Re: Icons: Cross-linguistic.. - George Leach@pdn.paradyn (1943)		
typescript		parnassus		are now working closely with a bunch from Bell Labs, so I can get stuff from their library. I was wondering if (1) if you either have published anything as a CMU TR or do you know any such TRs on visual communication and the computer? I've got Bertin's "Semilogy of Graphics", but I want more.....		
dan 1 & messages Starting messages (Version 7.11, ATK 12.2), please wait... dan 2 & printsnap /tmp/snapshot-1 print: warning: scale switch (X) ignored. print: snapshot-1 being queued on printer dogwood dan 3 & printsnap /tmp/snapshot-2 print: warning: scale switch (X) ignored. print: snapshot-2 being queued on printer dogwood dan 4 & printsnap /tmp/snapshot-3 print: warning: scale switch (X) ignored. print: snapshot-3 being queued on printer dogwood dan 5 &				messages-send Composing parnassus To: reggie@pdn.paradyne.com (George Leach) Subject: Re: Icons: Cross-linguistic Discussion CC: In-Reply-To: <m0gE3RD-0000V3C@dinsdale.paradyne.com> References: <m0gE3RD-0000V3C@dinsdale.paradyne.com> George, I can mail you (by regular mail, yes) a couple of article Information Technology Center (ITC) over the past few years. I'm Group here, and we've been working with the developers on And network. Regards, dan		
				Other File Page Search/Spell Paste Plainer Clear Send/Post Quit		
Checkpointing message... done. Wrote CKP file in ~/MZA BkS200UK51E9Uka.CKP						

console		ShowSeconds [7.4]	parnassus	messages-send	Sent/Posted	parnassus
Load		Monday 10/9/89	   	messages	6 Changed Folders	parnassus
				<input checked="" type="checkbox"/> <input type="checkbox"/> org.its (Local BB; 11 new of 302)		
				<input checked="" type="checkbox"/> <input type="checkbox"/> netnews.comp.cog-eng (Has New Messages)		
				<input checked="" type="checkbox"/> <input type="checkbox"/> netnews.comp.fonts (Has New Messages)		
typescript				parnassus		
<pre> dan 1 % messages Starting messages (Version 7.11, ATK 12.2), please wait... dan 2 % printsnap /tmp/snapshot-1 print: warning: scale switch (X) ignored. print: snapshot-1 being queued on printer dogwood dan 3 % printsnap /tmp/snapshot-2 print: warning: scale switch (X) ignored. print: snapshot-2 being queued on printer dogwood dan 4 % printsnap /tmp/snapshot-3 print: warning: scale switch (X) ignored. print: snapshot-3 being queued on printer dogwood dan 5 % printsnap /tmp/snapshot-4 print: warning: scale switch (X) ignored. print: snapshot-4 being queued on printer dogwood dan 6 % rm /tmp/snapshot-1 dan 7 % printsnap /tmp/snapshot-5 print: warning: scale switch (X) ignored. print: snapshot-5 being queued on printer dogwood dan 8 % rm /tmp/snapshot-2 dan 9 % rm /tmp/snapshot-3 dan 10 % rm /tmp/snapshot-4 dan 11 % rm /tmp/snapshot-5 dan 12 % ^ </pre>						
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> 2-Oct-89 <i>Thursday, 10/5 Speaker - Mary Strenio</i> (1291+0) <input type="checkbox"/> 2-Oct-89 <i>Re: A high-level language f.. - Amanda Walker@uunet.uu.n</i> (818) <input type="checkbox"/> 3-Oct-89 <i>Student Volunteers for Hype.. - Maria G. Wadlow</i> (21446+0) <input type="checkbox"/> 4-Oct-89 <i>Jaap's Bridge - Dorothy A. Zaborowski</i> (391+0) <input type="checkbox"/> 4-Oct-89 <i>Hole Punch - Dorothy A. Zaborowski</i> (109+0) <input type="checkbox"/> 5-Oct-89 <i>Kurzweil Scanner - Dorothy A. Zaborowski</i> (530+0) <input checked="" type="checkbox"/> 5-Oct-89 <i>Staff Meeting - Dorothy A. Zaborowski</i> (737+0) <input checked="" type="checkbox"/> 6-Oct-89 <i>Get Well Card - Dorothy A. Zaborowski</i> (110+0) <input checked="" type="checkbox"/> 6-Oct-89 <i>Bruce Lindsay slides - Ann Marks</i> (55+0) <input type="checkbox"/> 6-Oct-89 <i>Thom Peters' Status - John Howard</i> (501+0) <input type="checkbox"/> 6-Oct-89 <i>the Office of Technology Tr.. - David Anderson</i> (1117+0) <input type="checkbox"/> 9-Oct-89 <i>10/19 Speaker, Nix- Canceled - Mary Strenio</i> (185+0) 						
<p>Date: Fri, 6 Oct 89 10:44:26 -0400 (EDT) From: Ann Marks <annm+@andrew.cmu.edu> To: ITC-Bulletin-Board <itcbb+itc@andrew.cmu.edu> Subject: Bruce Lindsay slides</p> <p>are now available from Dorothy in the reception area.</p>						
Checkpointing message server state... done.						

console		ShowSeconds (7.4)	parnassus	messages-send	Sent/Posted	parnassus
Load		Monday 10/9/89		messages	6 Changed Folders	parnassus
				<input checked="" type="checkbox"/> org.its (Local BB; 11 new of 302) <input checked="" type="checkbox"/> netnews.comp.cog-eng (External BB; 14 new of 73) <input checked="" type="checkbox"/> netnews.comp.fonts (Has New Messages)		
Snapshot stored in file /tmp/snapshot-6 (4:53:42 PM)				<input checked="" type="checkbox"/> 28-Sep-89 SUMMARY: Cognitive Anthro... - James Murray@hodge.UUCP (6460) <input checked="" type="checkbox"/> 3-Oct-89 Icons: Cross-linguistic Dis... - Dan Boyarski@andrew.cmu. (2409) <input checked="" type="checkbox"/> 2-Oct-89 Re: Menu Interaction Techni... - Kent Borg@sunfs3.camex.u (2542) <input checked="" type="checkbox"/> 4-Oct-89 Information on HyperCard - THE GRADUATE@tut.cis.ohi (468) <input checked="" type="checkbox"/> 2-Oct-89 State of handwriting recogn... - Gary Ericson@hp-ptp.HP.C (1324) <input checked="" type="checkbox"/> 6-Oct-89 visual presentation of quan... - The News@spool.cs.wisc.e (334) <input checked="" type="checkbox"/> 6-Oct-89 2nd try - visual rep of qua... - The News@spool.cs.wisc.e (410) <input checked="" type="checkbox"/> 6-Oct-89 2nd try - visual rep of qua... - The News@spool.cs.wisc.e (410) <input checked="" type="checkbox"/> 6-Oct-89 one-finger keyboard - Jeffrey P. Adams@herb-ox (622) <input checked="" type="checkbox"/> 7-Oct-89 Re: one-finger keyboard - Andrew Sears@tove.umd.ed (1789) <input checked="" type="checkbox"/> 9-Oct-89 Re: one-finger keyboard - adam.v.reed@cbnet <input checked="" type="checkbox"/> 9-Oct-89 Re: one-finger keyboard - Donald N. C. S. Dep <input checked="" type="checkbox"/> 9-Oct-89 Re: Menu Interaction Techni... - Stuart H. Fer <input checked="" type="checkbox"/> 9-Oct-89 Re: visual presentation of .. - Robert E. Warre <input checked="" type="checkbox"/> 9-Oct-89 Re: visual presentation of .. - David M. Neves		
typescript				Other Message Folders File Into... This Message Forward To Resend To Append to File Print Search/Spell		
dan 1 % messages Starting messages (Version 7.11, ATK 12.2). please wait... dan 2 % printsnap /tmp/snapshot-1 print: warning: scale switch (X) ignored. print: snapshot-1 being queued on printer dogwood dan 3 % printsnap /tmp/snapshot-2 print: warning: scale switch (X) ignored. print: snapshot-2 being queued on printer dogwood dan 4 % printsnap /tmp/snapshot-3 print: warning: scale switch (X) ignored. print: snapshot-3 being queued on printer dogwood dan 5 % printsnap /tmp/snapshot-4 print: warning: scale switch (X) ignored. print: snapshot-4 being queued on printer dogwood dan 6 % rm /tmp/snapshot-1 dan 7 % printsnap /tmp/snapshot-5 print: warning: scale switch (X) ignored. print: snapshot-5 being queued on printer dogwood dan 8 % rm /tmp/snapshot-2 dan 9 % rm /tmp/snapshot-3 dan 10 % rm /tmp/snapshot-4 dan 11 % rm /tmp/snapshot-5 dan 12 % printsnap /tmp/snapshot-6 print: warning: scale switch (X) ignored. print: snapshot-6 being queued on printer dogwood dan 13 % ^				From: adams@herb-ox.berkeley.edu (Jeffrey P. Adams) Subject: one-finger keyboard Date: 6 Oct 89 22:10:13 GMT I'm working on developing an optimal keyboard (not QWERTY or... for *one-fingered* typing, and am looking for: 1. general advice. Does anyone know any good references (human or written) on the subject? 2. ideas regarding possible uses. (hand-helds, typewriters for handicapped, etc.) 3. information regarding public acceptance of new designs. Any help would be greatly appreciated.		
Checkpointing message server state... done.						

Cross-Cultural Aspects of Icon Design

Many of us, in the process of designing icons for computer interfaces, face the problem of having to design an icon that needs to be understood by other cultures.

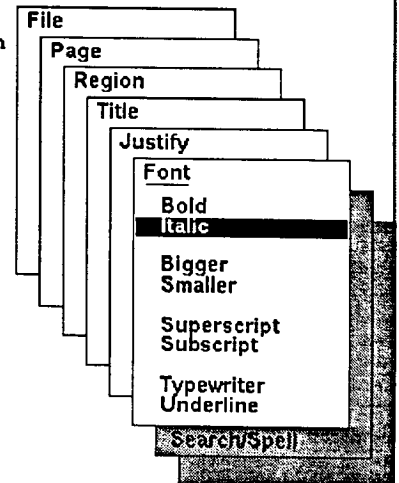
I happened across this bulletin-board, at the suggestion of a colleague, and found the discussion on this topic to be relevant, facinating, and entertaining. **I trust it will be the same for you** By no means is this a thorough discussion of the topic, but certainly food for thought.

Each note's author is identified at the top of the note, and sometimes at the end, if space allowed. Some of the authors expressed a desire to be kept abreast of any feedback. If you have any comments you might wish to add, please send them to me via e-mail or regular mail; my addresses appear below.

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Carnegie Mellon University
Pittsburgh, PA 15213

412.268.6717



typescript parnassus

```
dan 1 % messages
Starting messages (Version 7.11, ATK 12.2),
please wait...
dan 2 % ez cover
Starting ez (Version 7.0, ATK 12.2), please
wait...
dan 3 % ^
```

Snapshot stored in file /tmp/snapshot-1 (1:54:13 PM)

typescript parnassus

```

dan 1 % messages
Starting messages (Version 7.11, ATK 12.2),
please wait...
dan 2 % ez cover
Starting ez (Version 7.0, ATK 12.2), please
wait...
dan 3 % printsnap /tmp/snapshot-1
print: warning: scale switch (X) ignored.
print: snapshot-1 being queued on printer
dogwood
dan 4 % ^
    
```

Cross-Cultural Aspects of Icon Design

Many of us, in the process of designing icons for computer interfaces, face the problem of having to design an icon that needs to be understood by other cultures.

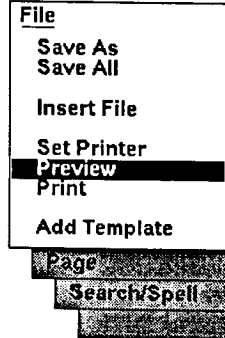
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console	ShowSeconds [7.4]	parnassus	messages-send	Sent/Posted	parnassus
Load		Tuesday 10/10/89	messages	5 Changed Folders	parnassus
			ez	~/cover	parnassus
	2		preview	cover/2 of 2	parnassus

Snapshot stored in file /tmp/snapshot-2 (1:55:19 PM)
 Starting preview (Version 7.0, ATK 12.2); please wait... (1:56:00)
 >> Virtual memory utilization is 93%. << (1:56:11 PM)
 >> Virtual memory utilization is 93%. << (1:56:22 PM)

typescript parnassus

```

dan 1 % messages
Starting messages (Version 7.11, ATK 12.2),
please wait...
dan 2 % ez cover
Starting ez (Version 7.0, ATK 12.2), please
wait...
dan 3 % printsnap /tmp/snapshot-1
print: warning: scale switch (X) ignored.
print: snapshot-1 being queued on printer
dogwood
dan 4 % printsnap /tmp/snapshot-2
print: warning: scale switch (X) ignored.
print: snapshot-2 being queued on printer
dogwood
dan 5 % ^

```

-2-

Cross-Cultural Aspects of Icon Design

Many of us, in the process of designing icons for computer interfaces, face the problem of having to design an icon that needs to be understood by other cultures.

I happened across this bulletin-board, at the suggestion of a colleague, and found the discussion on this topic to be relevant, fascinating, and entertaining. I trust it will be the same for you. By no means is this a thorough discussion of the topic, but certainly food for thought.

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Cross-Cultural Aspects of Icon Design

Many of us, in the process of designing icons for human-computer interfaces, face the problem of having to design an icon that must be understood by other cultures.

I happened across this bulletin-board, at the suggestion of a colleague, and found the discussion on this topic to be relevant, fascinating, and entertaining. I trust it will be the same for you. By no means is this a thorough discussion of the topic, but certainly food for thought.

Each note's author is identified at the top of the note, and sometimes at the end, if space allowed. Some of the authors expressed a desire to be kept abreast of any feedback. If you have any comments you might wish to add, please send them to me via e-mail or regular mail; my addresses appear below.

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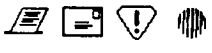
412.268.6717

console ShowSeconds [7.4] parnassus messages 1 Mail Folder parnassus

Load



Friday 10/20/89



- andrew.picture.tarot (Local BB; 5 new of 5)
- andrew.picture.mohawk (Local BB; 4 new of 4)

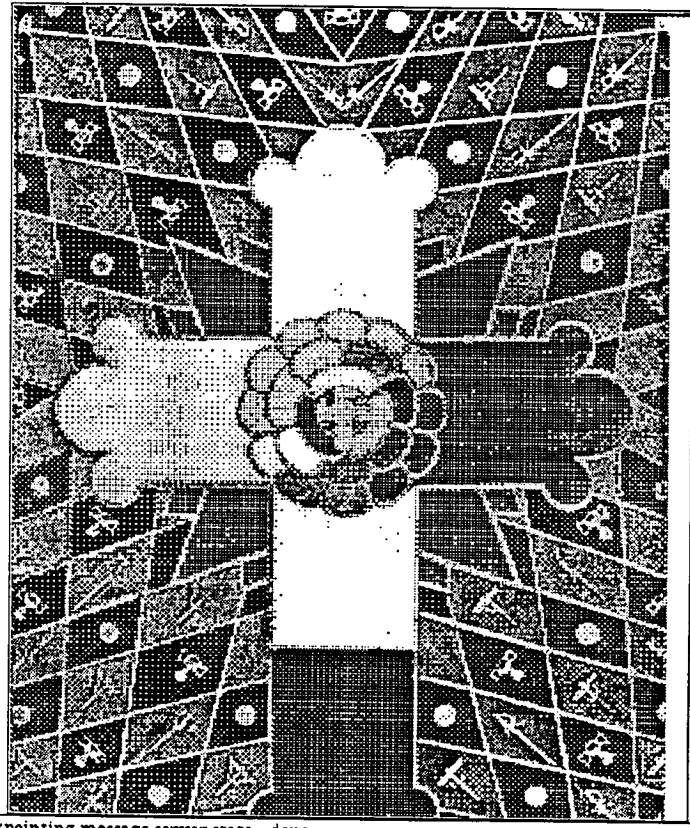
- 27-Oct-88 *Now there is a BB for Mohawk* - Kerr Doran Reno (462+0)
- 1-Jun-89 *Re: New folder: "magazines..."* - Pierette Maniago (1318+0)
- 9-Sep-89 *Whaaat* - Joseph Paul Cepec (39+0)
- 29-Sep-89 *Re: Whaaat* - Kerr Doran Reno (361+0)

typescript parnassus

```

dan 1 % readmail
Starting messages (Version 7.12, ATK 12.4);
please wait...
dan 2 %

```



Checkpointing message server state... done.

console	Monitor	chambersburg	grapher	u.edu/cdec/ctapps/general/grapher.t	chambersburg
Load	Monday 10/23/89				
typescript chambersburg					
<pre> 2 -rw----- 1 zs05 1085 Sep 25 14:13 A27aB2C00%o2M2DUVs.CKP 0 -rw-r--r-- 1 zs05 0 Sep 22 13:24 .TurnOnExternalPosting 0 -rw-rw-rw- 1 zs05 0 Sep 18 18:11 .ANS.prof.LOCK 2 drwxr-xr-x 3 zs05 2048 Sep 12 16:08 .MESSAGES 8 -rw-r--r-- 1 zs05 8008 Sep 12 16:08 creativity 1 -rw-r--r-- 1 zs05 103 Sep 12 16:08 .cshrc 1 -rw-r--r-- 1 zs05 167 Sep 12 16:08 .logout 1 -rw-r--r-- 1 zs05 334 Sep 12 16:08 .login 2 drwxr-xr-x 2 zs05 2048 Sep 12 16:08 private 2 drwxr-xr-x 2 zs05 2048 Sep 12 16:08 bin X help snapshot Starting help (Version 7.1. ATK 11.0), please wait... X is -l /tmp/snapshot* -rw-rw-rw- 1 zs05 98318 Oct 23 15:39 /tmp/snapshot-1 X printsnap /tmp/snapshot* </pre>					
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 40%;"> <pre> dx/dt=y dy/dt=-ay-(c+bcos(2))sin(x) dz/dt=w) </pre> </div> <div style="width: 55%; text-align: right;"> <input type="button" value="CALC"/> <input type="button" value="RUN"/> <input type="button" value="STOP"/> <input type="button" value="CLEAR"/> </div> </div> <div style="margin-top: 10px;"> </div>					

console TARDIS databank defran

Local Time Coordinator: Monday 10/23/85 5:29 PM No Mail

Local Memory Used: Vice #534 RamQ: 0

Console: Printing monitor terminated (No such directory) (2:57:23 PM)

```

R20 = 00000000 R21 = 00000000 R22 = 00000000 R23 = 00000000
R24 = 00000000 R25 = 00000000 R26 = 00000000 R27 = 00000000
R28 = 00000000 R29 = 00000000 R30 = 00000000 R31 = 00000000
0 load/store      2 memory access
0 all             0 immediate access
0 control         0 register access
PC = 00000000 (  )
ic = 1f002020

Trap: Illegal Instruction.
PC = 00000004
L644 "dlx.v": Stop at simulation time 2
Type ? for help
E1 > $display("op", 'opcode);
07
E2 > $display("sb" "sb", 'opcode);
000111
E3 > $display("sb" 'icic);
000111000000000010000000100000
E4 >

```

safe1	safe3	safe4	safe5
safe7	vice2	vice3	vice4
vice5	vice6	vice7	vice8
vice9	vice10	vice11	vice12
vice13	vice14	vice15	

```

task MOVE;
reg [2:0] size;
reg 'word_1' data;
reg 'byte_1' sign;
reg 'addr_1' address;

begin
case('opcode)
  'LB, 'LBU, 'SB: size = 'byte;
  'LH, 'LHU, 'SH: size = 'half;
  'LW, 'SW: size = 'word;
endcase
address = r[rs] + 'immediate;
case('opcode)
  'LB, 'LH, 'LW, 'LBU, 'LHU:
    begin
      Read(data, address, size);
      if (('opcode != 'LBU) && ('opcode != 'LHU) &&
          (data[size - 'byte_1] == 1))
        sign = 'NEGATIVE;
      else sign = 'POSITIVE;
    endcase
    'byte : r[rd] = [(sign), data[byte_1];

```

Search for [PC]

Starting ez (Version 7.0, ATK 12.4); please wait...

zg03.verg:6 %

101000_00001_00000_000

0111111111111111 sb /

0024 00 00 00 od /

000000_00000_00000_000

00_00000001101 halt /

zg03.verg:10 %



gnu-emacs Version 18.55.1 beaver

```
((ti-late-homework scott))  
Holy *!8668!!! I am out of gratis days  
I guess I better do this homework  
Boy that was an easy assignment, I wish I had started it earlier  
Thing that was not at this place (DORMITORY #[COMPOUND-PROCEDURE #X2841A]...
```

```
** Scheme 4 [Error Evaluator] (Scheme Interaction Input) Top  
(begin  
  (display (name 'name))  
  (display " ")  
  (display "Uhhhhh... Would you believe my dog at it?"))  
((eq? reason 'andrew)  
 (begin  
  (display (name 'name))  
  (display " ")  
  (display "Well... Andrew is down so I couldn't do it"))  
((eq? reason 'death)  
 (begin  
  (display (name 'name))  
  (display " ")  
  (display  
    "My uncle's mother's sister's father's ex-husband died, so I had")  
  (newline)  
  (display " to go to the funeral in Taiwan."))  
((eq? reason 'real)  
 (display "OK... you beat it out of me... I SCREWED UP!!!"))))
```

** Emacs part1.scm (Scheme Input) --- 251 ---

console YARDIS databank beaver

Space/Time Coordinates	No Printing	Screen	Clear
Monday 10/23/99 3:42:41 PM	1/2/1	Screen driver	Ball
Main Drive	Virtual Memore Used 93%	click for help	
10	Vice 23%		
	36% Free		
User	Sys		

>> Virtual memory utilization is 93%. << (3:03:01 PM)
af: setting clock back 2 seconds. (3:04:44 PM)
mail: From: Advisor <advisor@andrew.cmu.edu> (3:12:00 PM)
>> Virtual memory utilization is 93%. << (3:33:14 PM)

typescript beaver

```
properly; this is what is causing  
Messages to die. All I can really recommend  
is that if you continue to want  
to use rm -any messages, you will sometimes  
have to try to run it several  
times.  
  
-Todd Masco  
  
Student Consultant  
  
(You can send Advisor mail directed to me to  
advisor+inbox.thursday)  
  
\enddata(text,2563680)  
  
hw6>rm *  
rm: remove adventure.scm? n  
rm: remove cmu.scm? n  
rm: remove part1.scm? n  
rm: remove part1.scm-? n  
hw6>
```

Font	Region	Indent	Example	Quotation	LeftIndent
Title	Justify	Display	Description	Format/Note	Reference
Andy AndySans AndyType	Center Italic Fixed width Pass thru Underline	Bold Italic Fixed width Pass thru	Center Left flush Right flush Justified Left-right	up 15 super (up 6) up 4 up 2 sub (down 2) down 4 down 6	
Foot size: -8 -4 -2 +3 +6 7 9 11 14 18 24 36 -6 -3 +2 +4 +8 8 10 12 16 20 30					
relative margins and paragraph indent					
In. 0 +1 -1 0 +1					

I

in which the boundary lines between the ego and the external world become uncertain or in which they are actually drawn incorrectly.
pg 13

He searches to the external world things that clearly emanate in his own ego.
pg 13

In mental life, nothing can perish.
pg 15

It is always possible that ... some of what is old is effaced or absorbed.
pg 20

II

The purpose of human life ... They strive after happiness. When any situation ... is prolonged, it only produces a feeling of mild discontentment.
pg 24 25

- Types of happiness -
pg 25

typecript

Sole has no eyes.
Have a nice day.
/afs/andrew.cmu.edu/usc14/ct10: ↵

itbaca console C.A.R.D.S. databank itbaca

Space/Time Coordinates	No Printing	Maple: 0	Classer
Monday 10/23/89	3:30:46 PM	Bark: 1	BeH
Mean Drive	10	Cole: 0	
	Virtual Memory Used: 40%	Far: 0	
	Free: 81%	System: 3	
	232 Pages	Other: 8	
	Used: 10	Sys: 1	
		FontSet: 6	

View


delock

3:02

DATE: Monday, October 23, 1989

upload

ligonier.andrew.cmu.edu



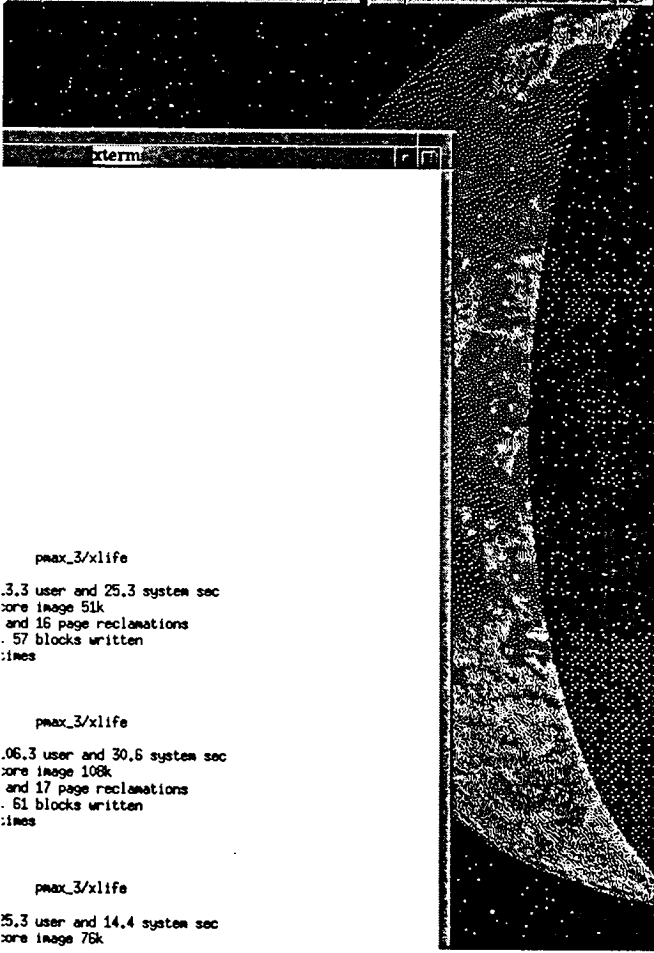
```
gzi-emacs: emacs @ ligonier.andrew.cmu.edu
cd /afs/andrew.cmu.edu/usr0/games/src/xlife/
build -k
cd pmax_3
cc -I../include -c -g3 -O2 ../lifefutil.c
cc -g3 -O2 -o xlife button.o data.o expose.o file.o generate.o key.o keyin.o lifefutil.o main.o motion.o utils.o -lX11
Compilation finished at Mon Oct 23 15:01:22

---Emacs: *compilation* 3:02pm 0.58[1] (Compilation: exit)---All---
{
  struct cell *ptr;
  unsigned long x,y;
  char stats[100];
  if(!hide) return;
  ptr = head;

  while(ptr != NULL){
    x=ptr->x;
    y=ptr->y;
    if((((x > xpos-8) && (x < (xpos + 8 + (MAINWIDTH >> (scale -1)))))) && ((y > ypos-8) && (y < (ypos + 8 + (MAINHEIGHT >> (scale -1)))))) && (ptr->dead < 2))){
      displaybox(ptr->live1,ptr->live2,x,y);
    }
    ptr = ptr->next;
  }
  sprintf(stats,"Generations: %lu, Boxes: %lu, Cells %lu \n",&generations,&numboxes,&numcells);
  XClearWindow(dispatch,inputw);
  XDrawString(dispatch, inputw, nttextgc,ICCOORDS(0,0),stats, strlen(stats));
  XFlush(dispatch);
}

void clear()
{
  struct cell *ptr,*nptr;

  bzero(cells,4*HASHSIZE);
}
---Emacs: lifefutil.c/xlife/ 3:02pm 0.58[1] (C)---65%---
```



```
pmax_3/xlife
.3.3 user and 25.3 system sec
core image 51k
and 16 page reclamations
.57 blocks written
:imes

pmax_3/xlife
.06.3 user and 30.6 system sec
core image 108k
and 17 page reclamations
.61 blocks written
:imes

pmax_3/xlife
25.3 user and 14.4 system sec
core image 76k
```

```
gnu-emacs: emacs @ youngstown.andrew.cmu.edu
writeln (output);
writeln (output, 'Constants vector (b) : ');
writeMatrix (b);
writeln (output, 'Bye. ');
end;
( writeSystem )

procedure GaussSolve (var A, B : MatrixRecType (*; var X : MatrixRecType*));
(* input: A, B (coefficient matrix and constant vector)
output: X (solution vector)
Descr: Computes the solution to AX=B using Gaussian Elimination.
*)
var Row, Col, PivotRow : integer;
Pivot : real;
begin
( GaussSolve )
for PivotRow := 1 to A.NumRows do
begin
Pivot := A.Matrix [PivotRow, PivotRow];
for Row := (PivotRow + 1) to A.NumRows do
begin
for Col := PivotRow to A.NumRows do
with A do
Matrix [Row, Col] := Matrix [Row, Col] - (Matrix [PivotRow, Col]
(Matrix [Row, PivotRow] / Pivot));
B.Matrix [Row, 1] := B.Matrix [Row, 1] - (B.Matrix [PivotRow, 1] *
(A.Matrix [Row, PivotRow] / Pivot));
end;
( for Row )
end;
( for PivotRow )
writeSystem (A, B);
( GaussSolve )
end;

(***** Main Program *****)
begin
GetSystem (A, B, X);
GaussSolve (A, B(*, X*));
writeSystem (A, B);
end.

Emacs: ge.p (Fundamental)---Bot
Write /afs/andrew.cmu.edu/usr8/sb38/Programs/pas/ge.p
E 169 - Output is already defined in this block
E 169 - Begin is already defined in this block
E 169 - Writeln is already defined in this block
170 ReadSquareMatrix (A);
Inserted ':'
E 170 - M is already defined in this block
E 170 - ReadSquareMatrix is already defined in this block
171 InitMatrix (x);
Inserted ':'
E Too many syntax errors - QUI
/afs/andrew.cmu.edu/usr8/sb38/Programs/pas: cd
/afs/andrew.cmu.edu/usr8/sb38: xod | xpr -device ps -output
maria/survey/sb38
```

```
Xterm II
E ----- Undefined record
In procedure GetSystem:
E - x undefined on line 170 173 175
E 212 - Type clash: pointer is incompatible with real
... Type of expression clashed with type of variable in assignment
E 217 - expression has invalid type
E 217 - Left operand of / must be integer or real, not pointer
E 219 - expression has invalid type
E 219 - Left operand of / must be integer or real, not pointer
/afs/andrew.cmu.edu/usr8/sb38/Programs/pas: pc ge.p
Mon Oct 23 15:12 1989 ge.p:
18 type MatrixRecType = array [1..MaxRow, 1..MaxCol] of Real;
E ----- Undefined t
ype
47 Matrix [i, j] := 0;
E ----- Replaced field id with a array id
In procedure InitMatrix:
E - Matrix improperly used on line 47
88 readln (input, M [i, j]);
Inserted ','
E 88 - Arguments to readln must be variables, not expressions
129 write (output, Matrix [i, j]:Field:Decimals,
');
Inserted ','
E 129 - Cannot write sets with two write widths
170 InitMatrix (x);
E ----- Undefined variable
173 x.NumRows := M.NumRows; ( initialize x and b )
E ----- Undefined record
In procedure GetSystem:
E - x undefined on line 170 173 175
217 Matrix [Row, Col] := Matrix [Row, Col] -
(Matrix [PivotRow, Col] *
E ----- Replaced field id with a array id
In procedure GaussSolve:
E - Matrix improperly used on line 217 218
In program GaussianElimination:
E - Real undefined on lines 18
/afs/andrew.cmu.edu/usr8/sb38/Programs/pas: pc ge.p
Mon Oct 23 15:13 1989 ge.p:
170 InitMatrix (x);
E ----- Undefined variable
173 x.NumRows := M.NumRows; ( initialize x and b )
E ----- Undefined record
In procedure GetSystem:
E - x undefined on line 170 173 175
/afs/andrew.cmu.edu/usr8/sb38/Programs/pas: pc ge.p
/afs/andrew.cmu.edu/usr8/sb38/Programs/pas: []
```

Desktop environment showing three windows: 'xpost' with a grid pattern, 'xload' with a graph, and 'dclock' displaying the time '3:20'. The desktop background is a grid pattern.