

# EXHIBIT A

JDX 274

PA-NAT-00000115

USDC-EDTX  
6:09-CV-446 LED

**JDX 274**

```

1 <!DOCTYPE html SYSTEM>
2 <HTML>
3 <GROUP>www</GROUP>
4 <TITLE>ViolaWWW Notes</TITLE>
5 <H1>ViolaWWW Alpha Release Notes</H1>
6 <P>
7 This is an alpha release of violaWWW. The primary intent of this
8 release is to provide a demo for the Design team to evaluate, to
9 provide user interface feedbacks, etc. The general look & feel is
10 expected to be <ITALIC>Motif</ITALIC>ed soon.
11 <P>
12 <EMPH>As is</EMPH>, this browser has trouble working with the HTML
13 documents from the network, unless they have the necessary SGML document
14 type declaration. This problem is being dealt with. Meanwhile, you can
15 try out the documents listed below.
16
17 <H2>A few things to try out:</H2>
18 <P>
19 Under the rotating globe menu, the ViolaWWW 'about' and 'help' documents
20 are fairly good representative of HMM1.
21 <P>
22 Under the <ITALIC>Local</ITALIC> bookmarks menu:
23 <DL>
24 <DT><A HREF="/home/wei/viola/docs/gnnElements.hmm1">gnnElements.hmm1</A>
25 <DD>A demo GNN header logo thingy.
26 <DT><A HREF="/home/wei/viola/docs/testAll.html">testAll.html</A>
27 <DD>Sample of HTML document.
28 <DT><A HREF="/home/wei/viola/docs/violabrief.hmm1">violabrief.hmm1</A>
29 <DD>A very long (too long) and <EMPH>drafty</EMPH> document on viola.
30 Has embedded GUIs.
31 <DT><A HREF="/home/wei/viola/inetRC/inetRC.hmm1b">InternetRC (all)</A>
32 <DD>An even longer document. Practically the whole inetRC catalog section.
33 <DT><A HREF="/home/wei/viola/gallery/collection.hmm1">Art Gallery</A>
34 <DD>Was a demo for GIF, but the GIF code used in viola is broken...
35 So the pictures in it are now temporarily in XBM.
36 <DT><A HREF="/home/wei/viola/docs/violaChier.hmm1">violaChier.hmm1</A>
37 <DD>Shows a tree graph, with hot-link tree nodes.
38 <DT><A HREF="/home/wei/viola/apps/doodle.v">Doodle</A>
39 <DD>A doodling 'program' as WWW 'doc'.
40 <DT><A HREF="/home/wei/viola/apps/vwq.v">Viola Survey</A>
41 <DD>Demos a fill-in/mail-out forms. Currently implemented as viola object,
42 but will be abstracted to be portable SGML, as in <CMD>&lt;ENTRY&gt;</CMD>.
43 A related idea is the <A HREF="/home/wei/viola/apps/ORABKOrder.v">
44 ORA Book Order Demos</A>.
45 <DT><A HREF="/home/wei/viola/apps/wave.v">Wave</A>
46 <DD>Sine wave plotting as WWW doc. Just a GUI toy, but demonstrates WWW
47 as transport infrastructure not just for static documents.
48 <DT><A HREF="/home/wei/viola/apps/clock.v">Clock</A>
49 <DD>A real working time telling clock as WWW 'doc'.
50 <DT><A HREF="/home/wei/viola/docs/testPlot.hmm1">testPlot.hmm1</A>
51 <DD>Demos a highly cool wire-frame plotting widget embedded in a document.
52 <EMPH>If you try this, you must exit viola properly (do not exit viola
53 with control-C), else the X server will be anguished.</EMPH>
54 </DL>
55 <P>
56 Please ignore the <ITALIC>Public</ITALIC> and <ITALIC>Private</ITALIC>
57 bookmarks for now.
58 <P>
59 Well, development continues! If you have any comments, suggestions,
60 bug-reports, whatever, at all, please feel free to send them my way.
61
62 <ADDRESS><P>Fei
63 <P><KED>pei@ora.com</KED>
64 </ADDRESS>
65 </HTML>
66

```

```
1 <!DOCTYPE html SYSTEM "html.dtd">
2 <HTML>
3 <TITLE>Test misc</TITLE>
4 <H1>Header 1</H1>
5 <H2>Header 2</H2>
6 <H3>Header 3</H3>
7 See the <A HREF=""/etc/motd">motd</A> for useles messages.
8 <XMP>
9 LISTING HTML_listing 0 0 10 10 25
10 TITLE HTML_title 0 0 10 10 25
11 </XMP>
12 Here is an ordered list:
13 <OL>
14 <LI>socks
15 <LI>scarf
16 <LI>pillows
17 </OL>
18 And an unordered list.
19 <UL>
20 <LI>rubber ball.
21 <LI>I recollect that, when a stripling, my first exploit in
22 squirrel-shooting was in a grove of tall walnut-trees that shades
23 one side of the valley. I had wandered into it at noontime, when
24 all nature is peculiarly quiet, and was startled by the roar of
25 my own gun, as it broke the Sabbath stillness around and was
26 prolonged and reverberated by the angry echoes.
27 <LI>if ever I should
28 wish for a retreat whither I might steal from the world and its
29 distractions, and dream quietly away the remnant of a troubled
30 life, I know of none more promising than this little valley.
31 </UL>
32 Definition lists:
33 <DL>
34 <DT>First term
35 <DD>Definition paragraph starts here.
36 <DT>Second term
37 <DD>Second definition paragraph starts here.
38 </DL>
39 Menu:
40 <MENU>
41 <LI>cinamon crepe
42 <LI>zinc coated pop corn.
43 <LI>rasberry spring water
44 </MENU>
45 Here is a dir (x2) :
46 <DIR>
47 <LI>socks 0
48 <LI>scarf 1
49 <LI>pillows 2
50 <LI>apple 3
51 <LI>kiwi 4
52 <LI>banana 5
53 <LI>pinball 6
54 </DIR>
55 <ADDRESS>Angel666
56 <P><KBD>ange1666@alpha.div</KBD>
57 </ADDRESS>
58 </HTML>
```

```
1 <!DOCTYPE hmm1 SYSTEM>
2 <TITLE>Test</TITLE>
3 <H1>List No. 5</H1>
4 <P>
5 The <CMD>&lt;VOBJF&gt;</CMD> tag can be used to insert viola applications.
6 Using this capability allows you embed in your document what you can
7 access or build using viola's programming, and GUIs. Of course too much
8 violaism reduces the portability of your document on the World Wide Web,
9 but anyway...
10 </P>
11 <P>
12 Here are some examples.
13 <H2>Clock</H2>
14 <VOBJF>/home/wei/viola/apps/clock.v</VOBJF>
15 <H2>Vicon</H2>
16 <VOBJF>/home/wei/viola/apps/vicon.v</VOBJF>
17 <P>
18 This can be a handy menu to tuck away at a corner of the screen.
19 </P>
20 <H2>Query</H2>
21 <VOBJF>/home/wei/viola/apps/vwq.v</VOBJF>
22 <P>
23 This application is intended to gather user information.
24 </P>
25 <H2>Wave fun</H2>
26 <VOBJF>/home/wei/viola/apps/wave.v</VOBJF>
27 <H2>Noodle doodles</H2>
28 <VOBJF>/home/wei/viola/apps/doodle.v</VOBJF>
29 <P>
30 So I was bored...
31 </P>
32 <P>
33 The end.
34 </P>
35
36
37
38
39
40
41
```

```
1 <!DOCTYPE hmm1 SYSTEM>
2 <HMM1>
3 <TITLE>Randomyster's Waves</TITLE>
4 <DL>
5 <DT>Title<DD>Brush Motion
6 <DT>Artist<DD>Rando "random art does not apologize" Myster
7 <DT>Date<DD>1993, March 7, before breakfast
8 </DL>
9 <VOBJF>colorwavy.v</VOBJF>
10 <P>
11 Warning: playing with color too much will take all the color resources....
12 (yes, this is a bug).
13 </HMM1>
```

```
1 <!DOCTYPE hmmml SYSTEM>
2 <HMMML>
3 <GROUP>www</GROUP>
4 <TITLE>xPlot</TITLE>
5 <H1>An equation and vector-objects plotting program</H1>
6 <P>
7 The <CMD>xplot</CMD> program was written by Scott Silvey at the
8 Experimental Computing Facility of UCB. In an experiment,
9 <CMD>xplot</CMD> was made accessible by other program, such as viola.
10 <P>
11 Here's a viola front-end to <CMD>xplot</CMD>, which is embedded
12 into <ITALIC>this</ITALIC> document.
13 <VOBJF>/home/weil/viola/apps/plot.v</VOBJF>
14 <EXAMPLE>
15 file /home/weil/vplot/off/x29.geom
16 equation .4 * sin(.4 * x + y)
17 equation .4 * sin(1 - x*x - y*y)
18 equation .4 * exp(1 - x*x - y*y) * sin(1 - x*x - y*y)
19 equation .4 * exp(1 - x*x - y*y) * sin(1 - x^4 - y^4)
20 </EXAMPLE>
21 </HMMML>
22
```

```

1 \class {vpane}
2 \name {plot}
3 \script {
4   switch (arg[0]) {
5     case "build":
6       /* arg[1]      sourcefile
7          * arg[2]      parent
8          * arg[3]      name
9          * arg[4]      width
10          * ret         documentObject or 0
11          */
12       docObj = plot_info("clone");
13       send(docObj, "build", arg[1], arg[2], arg[3], arg[4]);
14
15       if (isBlank(docObj) == 1) {
16         www.msg.tf("show", "");
17         concatenate("Failed to get ", arg[1]);
18         cursorShape("idle");
19         return 0;
20       } else {
21         www.msg.tf("show", "");
22         www.udl.tf("show", arg[1]);
23         return docObj;
24       }
25     break;
26   case "TTYObjp":
27     return nthChild(0);
28   case "canvas_WIDP":
29     case "canvas_widthP":
30     case "canvas_heightP":
31       return send(nthChild(2), arg[0]);
32     break;
33     usual();
34   }
35   \children {plot.TTY plot.head plot.body plot.cmd}
36   \width {500}
37   \height {500}
38
39   \class {txtLabel}
40   \name {plot.head}
41   \parent {plot}
42   \label {XPlot}
43   \maxHeight {18}
44   \font {normal}
45   \BColor {LemonChiffon2}
46   \BColor {LemonChiffon3}
47   \FColor {black}
48
49   \class {hpane}
50   \name {plot.body}
51   \parent {plot}
52   \children {plot.body.view plot.body.ctrl}
53   \script {
54     switch (arg[0]) {
55       case "canvas_WIDP":
56       case "canvas_widthP":
57       case "canvas_heightP":
58         return send(nthChild(0), arg[0]);
59       break;
60       case "TTYObjp":
61         return send(parent(), "TTYObjp");
62       break;
63       usual();
64     }
65     \BColor {black}
66
67     \class {field}
68     \name {plot.body.view}
69     \parent {plot.body}
70     \BColor {LightSteelBlue4}

```

```

76 \BColor {LemonChiffon2}
77 \FColor {black}
78 \script {
79   switch (arg[0]) {
80     case "canvas_WIDP":
81       return get("window");
82     break;
83     case "canvas_widthP":
84     return get("width");
85     break;
86     case "canvas_heightP":
87     return get("height");
88     break;
89     case "clear":
90     clearWindow();
91     return;
92     break;
93     case "expose":
94     case "config":
95     usual();
96     if (get("window") != 0) {
97       TTYObj = send(parent(), "TTYObjp");
98       send(TTYObj, "initClient");
99     }
100     after(1, TTYObj, "initClient");
101   }
102   /*
103   width = send(parent(), "canvas_widthP");
104   height = send(parent(), "canvas_heightP");
105   send(TTYObj, "output",
106     concat("window", get("window"), " ",
107     get("width"), " ", get("height")));
108   print(">>>");
109   concat("w ", get("window"), " ",
110     get("width"), " ", get("height"), "\n");
111   */
112   return;
113   break;
114   usual();
115 }
116
117 \class {vpane}
118 \name {plot.body.ctrl}
119 \parent {plot.body}
120 \children {plot.body.ctrl.ops plot.body.ctrl.cam plot.body.ctrl.quit}
121 \script {
122   switch (arg[0]) {
123     case "TTYObjp":
124       return send(parent(), "TTYObjp");
125     break;
126     case "SUPER_HACK":
127       return send(nthChild(0), "SUPER_HACK");
128     break;
129     usual();
130   }
131   \BColor {LemonChiffon2}
132   \maxWidth {60}
133   \gapH {2}
134   \class {menu}
135   \name {plot.body.ctrl.ops}
136   \parent {plot.body.ctrl}
137   \label {Ops}
138   \script {
139     switch (arg[0]) {
140       case "buttonRelease":
141         send(send(parent(), "TTYObjp"), "output", "quit");
142         quit();
143     }
144     /*
145     case "x29":
146       TTYObj = send(parent(), "TTYObjp");
147       send(TTYObj, "output", "domain -10 10 -10 10");
148     */

```

```

151 send(TTYObj, "output",
152 "file /home/wei/vplot/off/x29_geom");
153 send(TTYObj, "output", "expose");
154 return;
155 break;
156 case "TomCat":
157 TTYObj = send(parent(), "TTYObjP");
158 send(TTYObj, "output", "domain -10 10 -10 10");
159 send(TTYObj, "output",
160 "file /home/wei/vplot/off/TomCat");
161 return;
162 break;
163 case "eq1":
164 TTYObj = send(parent(), "TTYObjP");
165 send(TTYObj, "output", "interval .2");
166 send(TTYObj, "output", "domain -2 2 -2 2");
167 send(TTYObj, "output",
168 "equation .4 * sin(x * y)");
169 return;
170 break;
171 case "eq2":
172 TTYObj = send(parent(), "TTYObjP");
173 send(TTYObj, "output", "interval .2");
174 send(TTYObj, "output", "domain -2 2 -2 2");
175 send(TTYObj, "output",
176 "equation .4 * sin(1 - x*x - y*y)");
177 return;
178 break;
179 case "eq3":
180 TTYObj = send(parent(), "TTYObjP");
181 send(TTYObj, "output", "interval .2");
182 send(TTYObj, "output", "domain -2 2 -2 2");
183 send(TTYObj, "output",
184 "equation .4 * exp(1 - x*x - y*y) * sin(1 - x*x - y*y)");
185 return;
186 break;
187 case "eq4":
188 TTYObj = send(parent(), "TTYObjP");
189 send(TTYObj, "output", "interval .2");
190 send(TTYObj, "output", "domain -2 2 -2 2");
191 send(TTYObj, "output",
192 "equation .4 * exp(1 - x*x - y*y) * sin(1 - x^4 - y^4)");
193 return;
194 break;
195 case "SUPER_HACK":
196 set("visible", 0);
197 set("visible", 1);
198 return;
199 break;
200 usual();
201 }
202 \BDColor (white)
203 \BGColor (grey45)
204 \FGColor (white)
205 \gapH {3}
206 \gapV {3}
207 \maxHeight {20}
208 \height {20}
209 \menuConfig {
210 { file /home/wei/vplot/off/x29_geom } (send(self(), "x29");)
211 { file /home/wei/vplot/off/TomCat } (send(self(), "TomCat");)
212 { equation .4 * sin(x * y) } (send(self(), "eq1");)
213 { equation .4 * sin(1 - x*x - y*y) } (send(self(), "eq2");)
214 { equation .4 * exp(1 - x*x - y*y) * sin(1 - x*x - y*y) } (send(self(), "eq3");)
215 { equation .4 * exp(1 - x*x - y*y) * sin(1 - x^4 - y^4) } (send(self(), "eq4");)
216 }
217 {Quit} (quit());
218 }
219 }
220 }
221 }
222 }
223 }

```

```

224 \class {hpane}
225 \name {plot.body.ctrl.cam}
226 \parent {plot.body.ctrl}
227 \children {plot.body.ctrl.cam.x plot.body.ctrl.cam.y plot.body.ctrl.cam.z}
228 \script {
229 {
230 switch (arg[0]) {
231 case "TTYObjP":
232 return send(parent(), "TTYObjP");
233 break;
234 case "expose":
235 send(parent(), "SUPER_HACK");
236 break;
237 usual();
238 }
239 }
240 \gapH {3}
241 \gapV {3}
242 \maxHeight {200}
243 \height {200}
244 \class {slider}
245 \name {plot.body.ctrl.cam.x}
246 \parent {plot.body.ctrl.cam}
247 \script {
248 {
249 switch (arg[0]) {
250 case "_shownPosition":
251 send(TTYObj, "cx", arg[1]);
252 break;
253 case "expose":
254 usual();
255 TTYObj = send(parent(), "TTYObjP");
256 return;
257 break;
258 usual();
259 }
260 }
261 \BGColor (grey45)
262 \class {slider}
263 \name {plot.body.ctrl.cam.y}
264 \parent {plot.body.ctrl.cam}
265 \script {
266 {
267 switch (arg[0]) {
268 case "_shownPosition":
269 send(TTYObj, "cy", arg[1]);
270 break;
271 case "expose":
272 usual();
273 TTYObj = send(parent(), "TTYObjP");
274 return;
275 break;
276 usual();
277 }
278 }
279 \BGColor (grey45)
280 \class {slider}
281 \name {plot.body.ctrl.cam.z}
282 \parent {plot.body.ctrl.cam}
283 \script {
284 {
285 switch (arg[0]) {
286 case "_shownPosition":
287 send(TTYObj, "cz", arg[1]);
288 break;
289 case "expose":
290 usual();
291 TTYObj = send(parent(), "TTYObjP");
292 return;
293 break;
294 usual();
295 }
296 }
297 \BGColor (grey45)
298 }

```

```

299 \class {txtButton}
300 \name {plot.body.ctrl.quit}
301 \parent {plot.body.ctrl}
302 \label {Quit}
303 \script {
304   switch (arg[0]) {
305     case "buttonRelease":
306       send(send(parent(), "TTYObjP"), "output", "quit");
307   }
308 }
309
310
311
312 }
313 \BGColor {white}
314 \BGColor {grey45}
315 \gapY {3}
316 \gapV {3}
317 \maxHeight {20}
318 \height {20}
319
320 \class {txtEdit}
321 \name {plot.cmd}
322 \parent {plot}
323 \script {
324   switch (arg[0]) {
325     case "buttonPress":
326       send(send(parent(), "TTYObjP"), "initClient");
327       return;
328   }
329   break;
330   case "keyPress":
331     C = key();
332     if (C == '\r') {
333       cursorShape("busy");
334     }
335
336     print("issue command:", currentLine(), "\n");
337     send(get("parent"), "search", currentLine());
338     insert('\r');
339     insert(c);
340
341     if (cursorRow() != 0) {
342       /* a kludgy safe guard to simulate
343        * carriage-return then ctrl-p
344        */
345       insert('\r\l\l');
346     }
347     else {
348       insert(c);
349     }
350     return;
351   }
352   break;
353   case "busy":
354     cursorShape(arg[0]);
355   }
356   return;
357 }
358
359 \maxHeight {18}
360 \BGColor {grey45}
361 \FGColor {white}
362
363 \class {TTY}
364 \name {plot.tty}
365 \parent {plot}
366 \path {/home/wei/vplot/vplot}
367 \script {
368   /*\path {/home/wei/vplot/vplot} \path {/usr/ucb/yes} \path {/home/wei/simplex/t}
369   print(":", arg[0], ":", arg[1], "\n");*/
370   print("TTY: ", arg[0], "\n");
371 }
372
373   switch (arg[0]) {

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```

374   case "cx":
375     output(concat("cx ", arg[1]));
376     return;
377   break;
378   case "cy":
379     output(concat("cy ", arg[1]));
380     return;
381   break;
382   case "cz":
383     output(concat("cz ", arg[1]));
384     return;
385   break;
386   case "output":
387     output(arg[1]);
388     return;
389   break;
390   case "input":
391     in = input(0);
392     print("##### plot.tty input: {", in, "}\n");
393     /*
394     */
395     if (in == "BEGIN") {
396       print("plot.tty: sending initialization cmds\n");
397       output("bgcolor LemonChiffon1");
398       output("fgcolor black");
399
400       w = send(parent(), "canvas_WIDP");
401       width = send(parent(), "canvas_widthP");
402       height = send(parent(), "canvas_heightP");
403       output(concat("w ", w, ", width, ", height));
404     }
405     /*
406     */
407     return;
408   break;
409   case "init":
410     usual();
411     print("plot.tty: init\n");
412     initialize();
413     set("inDelimStr1", "\n");
414     set("inDelimStr2", "\r");
415     set("outDelimStr", "\n");
416     startClient();
417     return;
418   }
419   break;
420   case "initClient":
421     print("plot.tty: sending initialization cmds\n");
422
423     w = send(parent(), "canvas_WIDP");
424     width = send(parent(), "canvas_widthP");
425     height = send(parent(), "canvas_heightP");
426     output(concat("window ", w, ", width, ", height));
427     output("domain -2.2 -2.2");
428     output("interval .2");
429     output("equation 0");
430     output("bgcolor LemonChiffon1");
431     output("fgcolor yellow");
432     output("expose");
433     output("expose");
434
435     print(" w = {", w, "}\n");
436     return;
437   break;
438   }
439   usual();
440
441   \height {1}
442   \maxHeight {1}
443   \BGColor {LemonChiffon2}
444 }

```

```

1 \name {doodle}
2 \class {vpane}
3 \children {doodle.ctr1 doodle.canvas}
4 \width {400}
5 \height {400}
6
7 \class {hpane}
8 \name {doodle.ctr1}
9 \parent {doodle}
10 \children {doodle.ctr1.ops doodle.ctr1.brush doodle.ctr1.color}
11 \maxHeight {20}
12 \BGColor {grey45}
13
14 \class {menu}
15 \name {doodle.ctr1.ops}
16 \parent {doodle.ctr1}
17 \menuConfig {
18   {backUp}
19   {redraw}
20   {record on}
21   {record off}
22   {dump}
23   {clear stroke list}
24   {clearWindow}
25   {save}
26   {effect A, x10}
27   {effect A, x100}
28   {effect A, x200}
29   {effect A, x1000}
30   {effect B}
31   {effect C}
32   {effect D}
33   {effect E wave}
34 }
35 \label {Operation}
36 \maxWidth {100}
37 \FGColor {white}
38 \BGColor {grey45}
39 \BDCColor {white}
40
41 \class {menu}
42 \name {doodle.ctr1.brush}
43 \parent {doodle.ctr1}
44 \menuConfig {
45   {line}
46   {point}
47   {larger point}
48   {even larger point}
49   {monster point}
50   {textual 1}
51   {textual 2}
52   {textual 3}
53 }
54 \label {Brushes}
55 \maxWidth {100}
56 \FGColor {white}
57 \BGColor {grey45}
58 \BDCColor {white}
59
60 \class {menu}
61 \name {doodle.ctr1.color}
62 \parent {doodle.ctr1}
63 \menuConfig {
64   {black}
65   {white}
66   {red}
67   {blue}
68   {green}
69 }
70 \label {Colors}
71 \maxWidth {100}
72 \FGColor {white}
73 \BGColor {grey45}
74 \BDCColor {white}
75 \class {field}

```

```

76 \name {doodle.canvas}
77 \parent {doodle}
78 \script {
79   switch {arg[0]} {
80     case "mouseMove":
81       if {pendDown?} {
82         x0 = x1;
83         y0 = y1;
84         x1 = arg[1];
85         y1 = arg[2];
86         if {brush == 0} {
87           drawLine(x0, y0, x1, y1);
88           if {record == 1} {
89             stroke[count] = concat("drawLine(",
90               x0, ",", y0, ",",
91               x1, ",", y1, ",");
92             count = count + 1;
93           }
94           } else if {brush == 1} {
95             drawLine(x1, y1, x1, y1);
96             if {record == 1} {
97               stroke[count] = concat("drawLine(",
98                 x1, ",", y1, ",",
99                 x1, ",", y1, ",");
100              count = count + 1;
101            }
102            } else if {brush == 2} {
103              drawFillRect(x1, y1, x1 + 2, y1 + 2);
104              if {record == 1} {
105                stroke[count] = concat("drawFillRect(",
106                  x1, ",", y1, ",",
107                  x1 + 2, ",", y1 + 2, ",");
108                count = count + 1;
109              }
110              } else if {brush == 3} {
111                drawFillRect(x1, y1, x1 + 5, y1 + 5);
112                if {record == 1} {
113                  stroke[count] = concat("drawFillRect(",
114                    x1, ",", y1, ",",
115                    x1 + 5, ",", y1 + 5, ",");
116                    count = count + 1;
117                  }
118                  } else if {brush == 4} {
119                    drawFillRect(x1, y1, x1 + 10, y1 + 10);
120                    if {record == 1} {
121                      stroke[count] = concat("drawFillRect(",
122                        x1, ",", y1, ",",
123                        x1 + 10, ",", y1 + 10, ",");
124                        count = count + 1;
125                      }
126                      } else if {brush == 5} {
127                        drawFillRect(x1, y1, x1 + 100, y1 + 100);
128                        if {record == 1} {
129                          stroke[count] = concat("drawFillRect(",
130                            x1, ",", y1, ",",
131                            x1 + 100, ",", y1 + 100, ",");
132                            count = count + 1;
133                          }
134                          } else if {brush == 6} {
135                            c = nthChar(brushText, idx);
136                            drawText(x1, y1, 1, c);
137                            idx = idx + 1;
138                            if {record == 1} {
139                              stroke[count] = concat("drawText(",
140                                x1, ",", y1, ",",
141                                "1, ", c, ",");
142                                count = count + 1;
143                              }
144                              } else if {brush == 7} {
145                                c = nthChar(brushText, idx);
146                                drawText(x1, y1, 3, c);
147                                idx = idx + 1;
148                                if {record == 1} {
149                                  stroke[count] = concat("drawText(",
150                                    x1, ",", y1, ",",
151                                    "1, ", c, ",");
152                                    count = count + 1;
153                                  }
154                                  }
155                                  }

```

```

151     idx = idx + 1;
152     if (record == 1) {
153         stroke[count] = concat("drawText(",
154             xi, ", ", yi, ", ",
155             "3, ", c, ", ");");
156         count = count + 1;
157     }
158     return;
159 }
160
161 break;
162 case "buttonPress":
163     penDownp = 1;
164     x0 = mouseX();
165     y0 = mouseY();
166     x1 = x0;
167     y1 = y0;
168 break;
169 case "buttonRelease":
170     penDownp = 0;
171 break;
172 case "setColor":
173     set("FGColor", arg[i]);
174 break;
175 case "setBrush":
176     brush = arg[i];
177     if (brush == 6) {
178         idx = 0;
179         brushText = loadFile("/aliceInWonderland.txt");
180         brushText = loadFile("/home/wei/viola/apps/doodle.v");
181     }
182     brushText = loadFile("/usr/dict/words");
183     } else if (brush == 7) {
184         idx = 0;
185         brushText = loadFile("/usr/dict/words");
186     }
187 break;
188 case "clear":
189     count = 0;
190     clearWindow();
191     return;
192 break;
193 case "clearWindow":
194     clearWindow();
195     return;
196 break;
197 case "save":
198     tt = "";
199     for (i = 0; i < count; i = i + 1) {
200         tt = concat(tt, stroke[i], "\n");
201     }
202     print("Saving to doodle.out\n");
203     saveFile("/usr/tmp/doodle.out", tt);
204     return;
205 break;
206 case "dump":
207     for (i = 0; i < count; i = i + 1) {
208         print(i, "\t", stroke[i], "\n");
209     }
210     return;
211 break;
212 case "backup":
213     count = count - 1;
214     return;
215 break;
216 case "redraw":
217     tt = "";
218     for (i = 0; i < count; i = i + 1) {
219         tt = concat(tt, stroke[i]);
220     }
221     clearWindow();
222     interpret(tt);
223     return;
224 break;
225 case "record on":

```

```

226     record = 1;
227     return;
228 break;
229 case "record off":
230     record = 0;
231     return;
232 break;
233 case "effect A":
234     if (count <= 0) return;
235     n = arg[1];
236     for (i = 0; i < n; i = i + 1) {
237         /*
238         idx = random(1) % count;
239         print("idx=", idx, "\n");
240         print("> ", idx, "\t", stroke[idx], "\n");
241         hue = (random(0) % 50) * 2;
242         set("FGColor", concat(hue, ", ", hue, ", ", hue));
243         /*
244         set("FGColor", "grey90");
245         idx = random(1) % count;
246         interpret(stroke[idx]);
247         /*
248         set("FGColor", "grey80");
249         idx = random(1) % count;
250         interpret(stroke[idx]);
251         /*
252         set("FGColor", "grey70");
253         idx = random(1) % count;
254         interpret(stroke[idx]);
255         /*
256         return;
257     }
258     case "effect B":
259         if (count <= 0) return;
260         for (i = 0; i < count; i = i + 1) {
261             set("FGColor", "blue");
262             interpret(stroke[i]);
263             i = i + 1;
264         }
265         set("FGColor", "green");
266         interpret(stroke[i]);
267         i = i + 1;
268     }
269     return;
270 break;
271 case "effect C":
272     if (count <= 0) return;
273     for (i = 0; i < count; i = i + 1) {
274         set("FGColor", "blue");
275         interpret(stroke[i]);
276         i = i + 1;
277     }
278     set("FGColor", "grey");
279     interpret(stroke[i]);
280     i = i + 1;
281 }
282 break;
283 case "effect D":
284     if (count <= 0) return;
285     for (i = 0; i < count; i = i + 1) {
286         set("FGColor", "grey80");
287         interpret(stroke[i]);
288         i = i + 1;
289     }
290     set("FGColor", "grey70");
291     interpret(stroke[i]);
292     i = i + 1;
293 }
294 }
295 set("FGColor", "grey60");
296 interpret(stroke[i]);
297 i = i + 1;
298 }
299 }
300 break;

```

```
301 case "effect E":
302   if (count <= 0) return;
303   for (i = 2; i < count;) {
304     set("FGColor", "grey80");
305     interpret(stroke[i + 1]);
306
307     set("FGColor", "grey50");
308     interpret(stroke[i]);
309
310     set("FGColor", "grey80");
311     interpret(stroke[i - 1]);
312
313     set("FGColor", "white");
314     interpret(stroke[i - 2]);
315     i = i + 1;
316
317   }
318   return;
319
320 break;
321 case "init":
322   usual();
323   record = 1;
324   penDownP = 0;
325   return;
326
327 break;
328 }
329 usual();
330 }
```

```

1  \class (field)
2  \name (colorway)
3  \parent {}
4  \script {
5      switch (arg[0]) {
6          case "graph":
7              theta0 = theta0 + .8;
8              thetal = thetal + .5;
9
10             c0 = c0 + dir;
11             if (c0 <= 0) {
12                 dir = random(0) / 200000000;
13             } else if (c0 > 99) {
14                 dir = random(0) / -200000000;
15             }
16             for (x = x0; x < x1; x = x + 2) {
17                 theta0 = theta0 + .1;
18                 y = sin(theta0 * f) * r + r;
19                 thetal = thetal + .1;
20             }
21             set("FGColor", concat(c0, ' ', c0, ' ', c0));
22             drawLine(x, y, x, sin(thetal * f) * r + r);
23         }
24         if (view == 1) after(100, self(), "graph");
25         return;
26     }
27     case "randomizeBGColor":
28         if (view) {
29             set("BGColor", concatenate(random(0) / 200000000, " ",
30                 random(0) / 200000000, " ",
31                 random(0) / 200000000));
32             clearWindow();
33             after(10000, self(), "randomizeBGColor");
34         }
35         return;
36     }
37     case "VIEW_ON":
38         view = 1;
39         after(500, self(), "graph");
40         after(10000, self(), "randomizeBGColor");
41     }
42     case "expose":
43         send(send(parent(), "findTop"), "vw_relay", self(), "VIEW_ON");
44         send(send(parent(), "findTop"), "vw_relay", self(), "VIEW_OFF");
45         view = 1;
46         after(500, self(), "graph");
47         f = 10.0;
48         x0 = 0;
49         x1 = xx;
50         r = height() / 2.0;
51         after(10000, self(), "randomizeBGColor");
52     }
53     case "VIEW_OFF":
54         view = 0;
55     }
56     case "buttonPress":
57         send(self(), "VIEW_ON");
58     }
59     case "keyPress":
60         send(self(), "VIEW_OFF");
61     }
62     }
63     }
64     usual();
65 }
66 \width (100)
67 \height (100)
68 \

```

```
1 \class {field}
2 \name {wave}
3 \parent {}
4 \children {wave.sp}
5 \script {switch {arg[0]} {
6 case "graph":
7 /* degree = float(arg[1]) / 100.0 * 360.0;
8 print("degree=", degree, "\n");
9 */
10 f = float(arg[1]);
11 xx = width();
12 r = height() / 2.0;
13 theta = 0;
14 for (x = 20; x < xx; x = x + 2) {
15 theta = theta + .1;
16 y = sin(theta * f) * r + r;
17
18 /* print("x=", x, " y=", y, "\n");
19 print("theta=", theta, " f=", f, "\n");
20 */
21 drawLine(x, y, x, y + 1);
22 }
23 return;
24 break;
25 }
26 usual();
27 }
28 \width {149}
29 \height {200}
30 \BDColor {55 55 55}
31 \BGColor {blue}
32 \CRCColor {99 99 99}
33 \FGColor {99 99 99}
34 \
35 \class {slider}
36 \name {wave.sp}
37 \parent {wave}
38 \script {
39 switch {arg[0]} {
40 case "shownPositionV":
41 usual();
42 send(parent(), "graph", arg[1]);
43 return;
44 break;
45 }
46 usual();
47 }
48 \width {20}
49 \height {200}
50 \BDColor {55 55 55}
51 \BGColor {25 25 25}
52 \CRCColor {99 99 99}
53 \FGColor {99 99 99}
54 \direction {t}
55 \
56
57
```







```

1  \class {vpane}
2  \name {vwq}
3  \children {vwq.about vwq.email vwq.name vwq.org vwq.listP vwq.blank vwq.send}
4  \width {400}
5  \height {400}
6  \script {
7      switch (arg[0]) {
8          case "queryAddress":
9              return "a viola app...";
10         break;
11         case "queryTitle":
12             return "a viola app title...";
13         break;
14         case "queryIndex":
15             return 0;
16         break;
17         case "expose":
18             bell(2);
19             send(self(), "config", x(), y(), width(), height());
20         break;
21         default:
22             usual();
23     }
24 }
25 \class {txtDisp}
26 \name {vwq.about}
27 \parent {vwq}
28 \content {\f(3)ViolaWWW User Survey\f(1)}
29
30 Please take a few moments to fill out this
31 form for a users survey. Thanks.
32
33 \BGCOLOR {LemonChiffon3}
34 \FGCOLOR {black}
35
36 \class {hpane}
37 \name {vwq.email}
38 \parent {vwq}
39 \children {vwq.email.title vwq.email.entry}
40 \maxHeight {20}
41
42 \class {txtLabel}
43 \name {vwq.email.title}
44 \parent {vwq.email}
45 \label {Your E-Mail address:}
46 \paneConfig {eastToWest}
47 \maxWidth {150}
48 \BGCOLOR {grey45}
49
50 \class {txtEdit}
51 \name {vwq.email.entry}
52 \parent {vwq.email}
53 \script {
54     switch (arg[0]) {
55         case "keyPress":
56             c = key();
57             switch (c) {
58                 case '\t':
59                     case '\r':
60                         if (shiftKeyP()) vwq.send("focus");
61                         else vwq.name.entry("focus");
62                         return;
63                     break;
64                 default:
65                     insert(c);
66                     return;
67                 break;
68             }
69         case "contentP":
70             return get("content");
71         break;
72     }
73     usual();
74 }

```

```

76 \BGCOLOR {LemonChiffon1}
77 \FGCOLOR {black}
78 \RCOLOR {red}
79
80 \class {hpane}
81 \name {vwq.name}
82 \parent {vwq}
83 \children {vwq.name.title vwq.name.entry}
84 \maxHeight {20}
85
86 \class {txtEdit}
87 \name {vwq.name.entry}
88 \parent {vwq.name}
89 \script {
90     switch (arg[0]) {
91         case "keyPress":
92             c = key();
93             switch (c) {
94                 case '\t':
95                     case '\r':
96                         if (shiftKeyP()) vwq.email.entry("focus");
97                         else vwq.org.entry("focus");
98                         return;
99                     break;
100                default:
101                    insert(c);
102                    return;
103                break;
104            }
105        case "contentP":
106            return get("content");
107        break;
108    }
109    case "init":
110        set("content", pipe("whoami"));
111    */
112    tmpWhoAmI = makeTempFile();
113    system(concat("whoami > ", tmpWhoAmI));
114    set("content", trimEdge(loadFile(tmpWhoAmI)));
115    system(concat("rm -f ", tmpWhoAmI));
116    */
117
118    set("content", pipe("whoami"));
119    finfo = nthLine(pipe("finger 'whoami'", 1, 1);
120    cidx = findPattern(finfo, "in real life: ");
121    if (cidx != -1) {
122        set("content", nthChars(finfo, cidx, 999));
123    } else {
124        set("content", "");
125    }
126    */
127    break;
128    }
129    usual();
130 }
131 \BGCOLOR {LemonChiffon1}
132 \FGCOLOR {black}
133 \RCOLOR {red}
134
135 \class {txtLabel}
136 \name {vwq.name.title}
137 \parent {vwq.name}
138 \label {Your name:}
139 \paneConfig {eastToWest}
140 \maxWidth {150}
141 \BGCOLOR {grey45}
142
143 \class {hpane}
144 \name {vwq.org}
145 \parent {vwq}
146 \children {vwq.org.title vwq.org.entry}
147 \maxHeight {100}
148 \BGCOLOR {grey45}
149
150 \class {txtLabel}
151 \name {vwq.org.title}

```

```

151 \parent {vwq.org}
152 \label {Your organization;}
153 \paneconfig {eastToWest}
154 \maxwidth {150}
155 \maxheight {20}
156 \bgcolor {grey45}
157 \
158 \class {txtEdit}
159 \name {vwq.org.entry}
160 \parent {vwq.org}
161 \script {
162     switch (arg[0]) {
163         case "keyPress":
164             c = key();
165             if (c == '\t') {
166                 if (shiftKeyP()) vwq.name.entry("focus");
167                 else vwq.listP.check("focus");
168                 return;
169             } else {
170                 insert(c);
171                 return;
172             }
173         case "contentP":
174             return get("content");
175         break;
176         case "keyPress":
177             usual();
178         break;
179     }
180     \bgcolor {lemonChiffon1}
181     \fgcolor {black}
182     \rcolor {red}
183     \
184     \class {hpane}
185     \name {vwq.listP}
186     \parent {vwq}
187     \children {vwq.listP.check vwq.listP.title}
188     \maxheight {20}
189     \
190     \class {toggle}
191     \name {vwq.listP.check}
192     \parent {vwq.listP}
193     \script {
194         switch (arg[0]) {
195             case "keyPress":
196                 c = key();
197                 if (c == '\t') {
198                     if (shiftKeyP()) vwq.org.entry("focus");
199                     else vwq.blank("focus");
200                     return;
201                 } else {
202                     send(self(), "buttonRelease");
203                     return;
204                 }
205             break;
206             case "contentP":
207                 if (get("toggleState") == 1)
208                     return "viola-announce@xcf.berkeley.edu";
209                 else return "";
210             break;
211             usual();
212         }
213     }
214     \style {check}
215     \maxwidth {18}
216     \bgcolor {grey45}
217     \
218     \class {txtLabel}
219     \name {vwq.listP.title}
220     \parent {vwq.listP}
221     \label {Check to be added to viola-announce@xcf.berkeley.edu}
222     \script {
223         switch (arg[0]) {
224             case "buttonPress":
225                 case "buttonRelease":

```

```

226     return send("vwq.listP.check", arg[0]);
227     break;
228     case "keyPress":
229         c = key();
230         if (c == '\t') {
231             if (shiftKeyP()) vwq.org.entry("focus");
232             else vwq.blank("focus");
233             return;
234         } else {
235             vwq.listP.check("buttonRelease");
236             return;
237         }
238     break;
239     }
240     usual();
241     \font {normal}
242     \bgcolor {grey45}
243     \
244     \class {txtEdit}
245     \name {vwq.blank}
246     \parent {vwq}
247     \content {\Space for any comments you might have.}
248     \script {
249         switch (arg[0]) {
250             case "keyPress":
251                 c = key();
252                 switch (c) {
253                     case '\t':
254                         if (shiftKeyP()) vwq.listP.check("focus");
255                         else vwq.send("focus");
256                         return;
257                     break;
258                     default:
259                         insert(c);
260                         return;
261                     break;
262                 }
263             break;
264             case "focus":
265                 mousePos = mouse();
266                 winPos = windowPosition();
267                 mx = mousePos[0];
268                 my = mousePos[1];
269                 dx = ((winPos[0] + width() / 2) - mx) / 10.0;
270                 dy = ((winPos[1] + height() / 2) - my) / 10.0;
271                 for (i = 0; i < 10; i = i + 1) {
272                     mx = mx + dx;
273                     my = my + dy;
274                     setMouse(mx, my);
275                 }
276                 return;
277             break;
278         }
279     }
280     case "contentP":
281         return get("content");
282     break;
283     }
284     usual();
285     \bgcolor {lemonChiffon1}
286     \fgcolor {black}
287     \rcolor {red}
288     \font {normal}
289     \
290     \class {txtButton}
291     \name {vwq.send}
292     \parent {vwq}
293     \label {Press to e-mail this off}
294     \script {
295         switch (arg[0]) {
296             case "buttonRelease":
297                 tmpUserInfo = makeTempFile();
298                 system(concat("whoami > ",

```

```

301 tmpWhoAmI = makeTempFile();
302 system(concat("who am i > ", tmpWhoAmI));
303 /* bugged
304
305 "User Info:: ", pipe("grep 'whoami' /etc/passwd"), "\n"
306 "WhoAmI:: ", pipe("who am i"), "\n",
307 */
308
309 tt = concat(
310     "**** Survey extract *****\n",
311     "User email : ", vwq.email.entry("contentP"), "\n",
312     "User name : ", vwq.name.entry("contentP"), "\n",
313     "Add to : ", vwq.listP.check("contentP"), "\n",
314     "Organiz. : ", vwq.org.entry("contentP"), "\n",
315     "Who Am I : ", trimEdge(loadFile(tmpWhoAmI)), "\n",
316     "User Info : ", trimEdge(loadFile(tmpWhoAmI)), "\n",
317     "Comments : ", vwq.blank("contentP"), "\n",
318     "*****\n");
319
320 print("\n\nif this survey were for real, the following text woul
321 d be mailed:\n\n", tt, "\n\n");
322
323 tmp = makeTempFile();
324 saveFile(tmp, tt);
325 system(concat(MAILER, " ", "-s survey ",
326             RECEIVER, " < ", tmp));
327
328 system(concat("rm -f ", tmp,
329             " ", tmpUserInfo,
330             " ", tmpWhoAmI
331             ));
332
333 break;
334 case "keyPress":
335     C = key();
336     if (C == '\t') {
337         if (shiftKeyP()) vwq.blank("focus");
338         else vwq.email.entry("focus");
339         return;
340     } else if (C == 'r') {
341         send(self(), "buttonRelease");
342         return;
343     }
344
345 break;
346 case "init":
347     RECEIVER = "pei@pebble";
348     MAILER = "Mail";
349
350 break;
351 }
352 usual();
353
354 \BGColor (grey45)
355 \BDCColor (white)
356 \maxHeight (25)
357 \gapH (2)
358 \gapV (3)
359 \

```



# ViolaWWW Notes

## ViolaWWW Alpha Release Notes

This is an alpha release of violaWWW. The primary intent of this release is to provide a demo for the Design team to evaluate, to provide user interface feedbacks, etc. The general look & feel is expected to be *Motif*'ed soon.

**As is**, this browser has trouble working with the HTML documents from the network, unless they have the necessary SGML document type declaration. This problem is being dealt with. Meanwhile, you can try out the documents listed below.

### A few things to try out:

Under the rotating globe menu, the ViolaWWW "about" and "help" documents are fairly good representative of HMML.

Under the *Local* bookmarks menu:

#### **gnnElements.hmml**

A demo GNN header logo thingy.

#### **testAll.html**

Sample of HTML document.

#### **violaBrief.hmml**

A very long (too long) and **drafty** document on viola. Has embedded GUIs.

#### **InternetRC (all)**

An even longer document. Practically the whole InetRC catalog section.

#### **Art Gallery**

Was a demo for GIF, but the GIF code used in viola is broken... So the pictures in it are now temporarily in XBM.

#### **violaChier.hmml**

Shows a tree graph, with hot-link tree nodes.

#### **Doodle**

A doodling "program" as WWW "doc".

#### **Viola Survey**

# ViolaWWW Notes

## violaBriet.hmm1

A very long (too long) and **drafty** document on viola. Has embedded GUIs.

## InternetRC (all)

An even longer document. Practically the whole InetRC catalog section.

## Art Gallery

Was a demo for GIF, but the GIF code used in viola is broken... So the pictures in it are now temporarily in XBM.

## violaChier.hmm1

Shows a tree graph, with hot-link tree nodes.

## Doodle

A doodling "program" as WWW "doc".

## Viola Survey

Demos a fill-in/mail-out forms. Currently implemented as viola object, but will be abstracted to be portable SGML, as in <ENTRY>. A related idea is the ORA Book Order Demo.

## Wave

Sine wave plotting as WWW doc. Just a GUI toy, but demonstrates WWW as transport infrastructure not just for static documents.

## Clock

A real working time telling clock as WWW "doc".

## testPlot.hmm1

Demos a highly cool wire-frame plotting widget embedded in a document.  
**If you try this, you must exit viola properly (do not exit viola with control-C), else the X server will be anguished.**

Please ignore the *Public* and *Private* bookmarks for now.

Well, development continues! If you have any comments, suggestions, bug-reports, whatever, at all, please feel free to send them my way.

Pei

pei@ora.com

No Search

re load SRC FILE

Message:

URL: file:///client/home/wei/viola/docs/README\_alpha.hmm1

# Test misc

## Header 1

## Header 2

### Header 3

See the [motd](#) for useless messages.

LISTING	HTML_listing	0	0	10	10	25
TITLE	HTML_title	0	0	10	10	25

Here is an ordered list:

- ① socks
- ② scarf
- ③ pillows

And an unordered list.

- rubber ball.
- I recollect that, when a stripling, my first exploit in squirrel-shooting was in a grove of tall walnut-trees that shades one side of the valley. I had wandered into it at noontime, when all nature is peculiarly quiet, and was startled by the roar of my own gun, as it broke the Sabbath stillness around and was prolonged and reverberated by the angry echoes.
- If ever I should wish for a retreat whither I might steal from the world and its distractions, and dream quietly away the remnant of a troubled life, I know of none more promising than this little valley.

Definition lists:

First term

Definition paragraph starts here.

Second term

Second definition paragraph starts here.

Menu:

No Search

Message:

URL: file:///client/home/wei/viola/docs/testAll.html

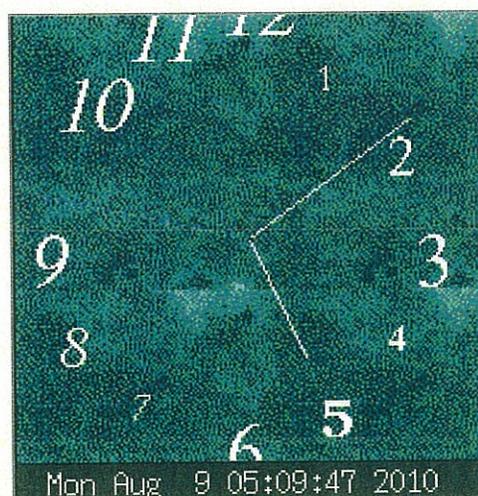
# Test

## List No. 5

The <VOBJF> tag can be used to insert viola applications. Using this capability allows you embed in your document what you can access or build using viola's programming, and GUIs. Of course too much violaism reduces the portability of your document on the World Wide Web, but anyway...

Here are some examples.

### Clock



### Vicon



This can be a handy menu to tuck away at a corner of the screen.

### Query

## Viola WWW User Survey

Please take a few moments to fill out this form for a users survey. Thanks.

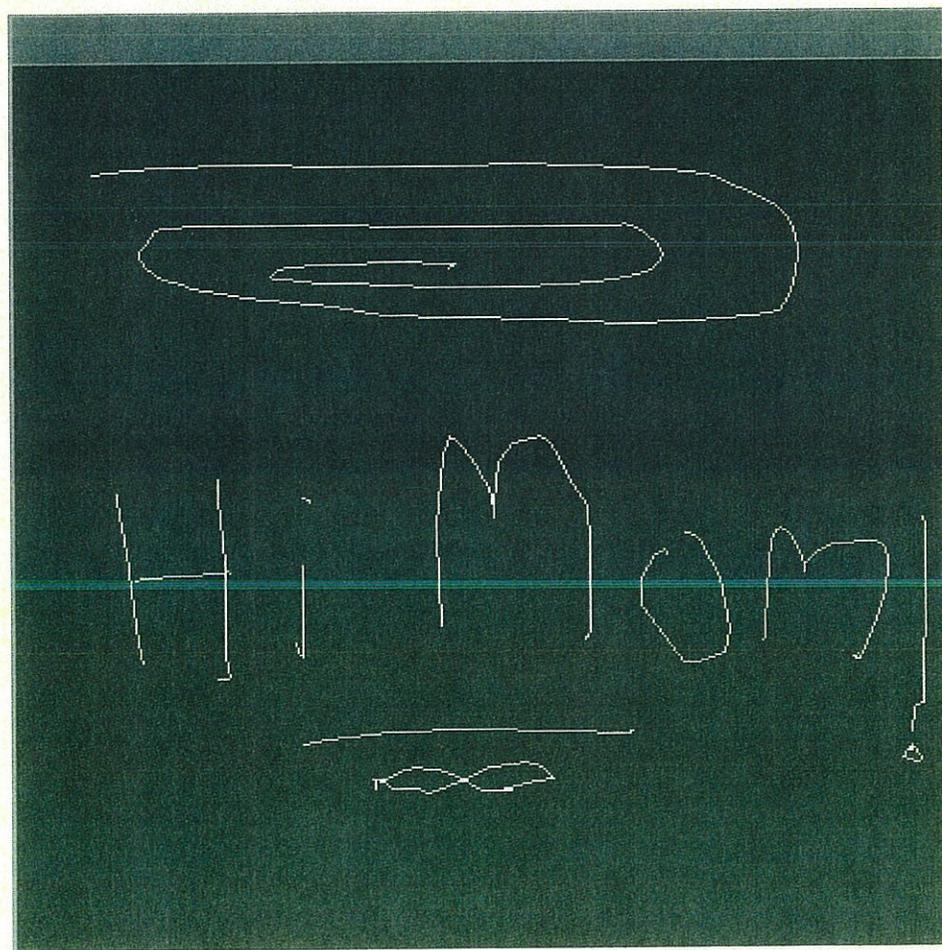
Your E-Mail address:

# Test

## Wave fun



## Noodle Doodles



No Search

re load SRC FILE

Message:

URL: file:///client/home/wei/viola/docs/violaApps.html

# RandoMyster's Waves

**Title**

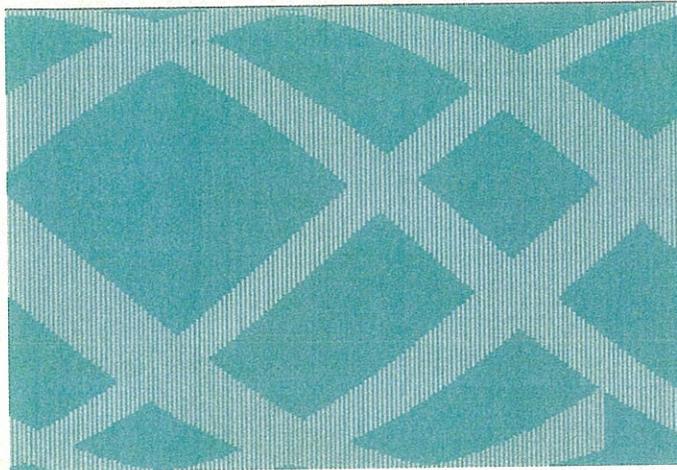
Brush Motion

**Artist**

Rando "random art does not apologize" Myster

**Date**

1993, March 7, before breakfast



New Color

Warning: playing with color too much will take all the color resources... (Yes, this is a bug).

No Search

FILE SRC FILE

Message:

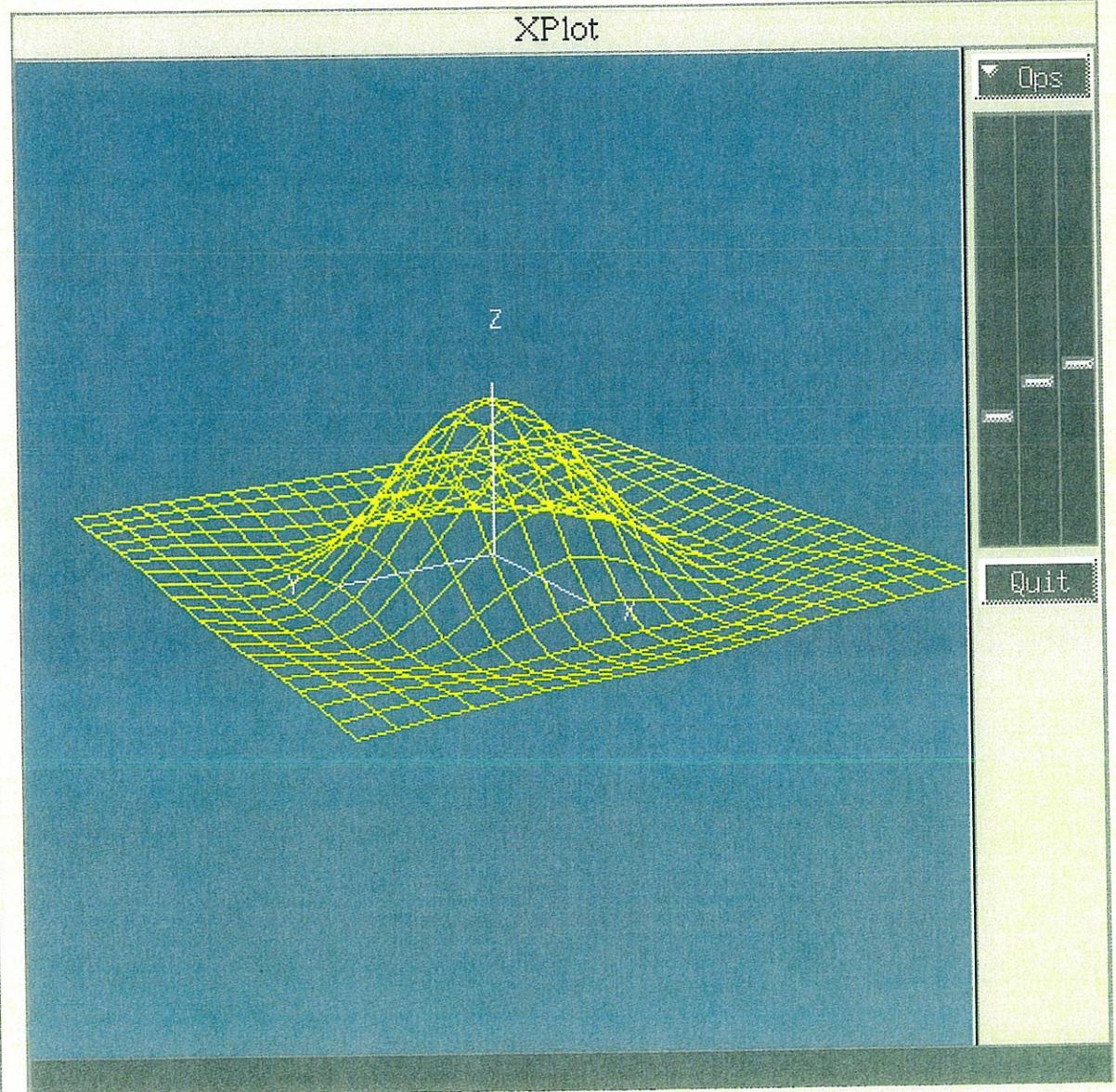
URL: file://client/home/wei/viola/gallery/randomyster.html

# XPlot

## An equation and vector-objects plotting program

The `xplot` program was written by Scott Silvey at the Experimental Computing Facility of UCB. In an experiment, `xplot` was made accessible by other program, such as `viola`.

Here's a `viola` front-end to `xplot`, which is embedded into *this* document.



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