ascii

David Hajage

October 24, 2009

ascii by David Hajage LIST OF TABLES CONTENTS

Contents

L	news	1
	1.1 2009/10/24	1
	1.2 2009/07/16	1
	1.3 2009/05/11	1
	1.4 2009/04/27	1
	1.5 2009/04/08	1
2	short example	2
3	what ascii provides	2
4	features/options	2
5	ascii examples	3
	5.1 vector	3
	5.2 matrix	3
	5.3 data.frame	4
	5.4 row (and col) headings	4
	5.5 summary.table	6
	5.6 labeled list	6 7
	5.7 glm	8
	5.9 plot	10
	5.10 other outputs	11
6	convert	12
J	Convert	14
7	more informations	12
8	ascii for real	12
L	st of Tables	
	1 A simple matrix	2
	2 VADeaths	4
	3 iris	5
	4 glm.D93	8
	5 anova glm.D93	8

ascii is a R package for writing asciidoc, txt2tags, sphinx or org documents with embeded R commands.

1 news

1.1 2009/10/24

- version 0.3
- list.type can be "label"
- ascii.simple.list method
- rownames and colnames arguments
- cgroup for txt2tags output
- improve col alignment in txt2tags output
- sphinx driver and output
- org driver and output
- improve row and col span (cgroup and rgroup)
- remove SweaveAscii() function
- Asciidoc(), T2t(), Sphinx() and Org() (wrapper for Sweave("file.Rnw", RweaveXx-x))

1.2 2009/07/16

- version 0.2
- digit and format accept matrix, (each cell can have its own number of digits and format)
- new arguments (cgroup, rgroup,...) to define major column and row heading s like in Hmisc::latex() (only for asciidoc output)
- column style and alignment use cell specifiers
- remove SweaveSyntaxAscii (bug when] is used inside Sexpr:[])

1.3 2009/05/11

- \SweaveOpts{} now works
- add SweaveSyntaxAscii (SweaveOpts:[], Sexpr:[])
- add a simple wrapper for Sweave() (SweaveAscii()) that use RweaveAsciidoc and SweaveSyntaxAscii as default

1.4 2009/04/27

- add a caption.level argument
- improve ascii.describe output (package Hmisc)

1.5 2009/04/08

- update DESCRIPTION (with homepage)
- support for describe function in package Hmisc

2 short example

```
<<>>=
x <- matrix(1:4, 2, 2)
x
@
```

gives:

```
<<results=ascii,echo=FALSE>>= ascii(x, caption = "A simple matrix", width = 30) @
```

gives:

Table 1 A simple matrix

1.00	3.00	
2.00	4.00	

3 what ascii provides

ascii provided:

- a generic method for common R objects: ascii(). Default argument depends of R object,
- several Sweave drivers: Sweave ("yourfile.Rnw", RweaveAsciidoc()), Sweave ("yourfile.Rnw", RweaveSphinx()) and Sweave ("yourfile.Rnw", RweaveSphinx()) and Sweave ("yourfile.Rnw", RweaveOrg()).
- some simple wrappers for Sweave() named Asciidoc(), T2t(), Sphinx() and Org().

4 features/options

See ?ascii for the description of all arguments.

	asciidoc	txt2tags	sphinx	org
Arguments				
include.rownames	yes	yes	yes	yes
include.colnames	yes	yes	yes	yes
rownames	yes	yes	yes	yes
colnames	yes	yes	yes	yes
format	yes	yes	yes	yes
digits	yes	yes	yes	yes
decimal.mark	yes	yes	yes	yes
na.print	yes	yes	yes	yes
caption	yes	yes	yes	yes
caption.level	yes	yes	yes	yes
width	yes	no	no	no
frame	yes	yes (all or none)	no	no
grid	yes	no	no	no
valign	yes	no	no	no
header	yes	yes	yes	yes

5 ASCII EXAMPLES 5.2 matrix

	asciidoc	txt2tags	sphinx	org
footer	yes	yes	no	no
align	yes	yes	no	no
col.width	yes	no	no	no
style	yes	yes	yes	yes
cgroup	yes	yes	yes	no
n.cgroup	yes	yes	yes	no
calign	yes	yes	no	no
cvalign	yes	no	no	no
cstyle	yes	yes	yes	no
rgroup	yes	no	yes	no
n.rgroup	yes	no	yes	no
ralign	yes	no	no	no
rvalign	yes	no	no	no
rstyle	yes	no	yes	no
list.type	yes	yes	yes	yes
condense	yes	yes	yes	yes
Output				
html	yes	yes	yes	yes
docbook	yes	yes	no	yes
latex	yes	yes	yes (col and row	yes
	(experimental)		spans not	
			implemented	
			yet)	
Feature				
syntax color	yes (but not for R)	no	yes	yes

5 ascii examples

ascii provides methods for:

```
> methods (ascii)
[1] ascii.anova* ascii.aov* ascii.aovlist*
[4] ascii.cast_df* ascii.character* ascii.coxph*
[7] ascii.data.frame* ascii.default* ascii.density*
[10] ascii.describe* ascii.describe.single* ascii.factor*
[13] ascii.glm* ascii.htest* ascii.integer*
[16] ascii.list* ascii.lm* ascii.matrix*
[19] ascii.numeric* ascii.prcomp* ascii.simple.list*
[22] ascii.smooth.spline* ascii.summary.aov* ascii.summary.aovlist*
[25] ascii.summary.glm* ascii.summary.lm* ascii.summary.prcomp*
[28] ascii.summary.table* ascii.survdiff* ascii.table*
[31] ascii.ts* ascii.zoo*
```

5.1 vector

	1.00	2.00	3.00	4.00
--	------	------	------	------

5.2 matrix

5 ASCII EXAMPLES 5.3 data.frame

```
> ascii(VADeaths, include.rownames = T, include.colnames = T, caption = "VADeaths ↔
   header = T, col.width = c(1, 2, 2, 2, 2, 2), valign = "middle",
   align = "lrrrr", frame = "topbot")
[frame="topbot", valign="middle", options="header", cols="1,2,2,2,2"]
|-----
<.^| >.^| Rural Male >.^| Rural Female >.^| Urban Male >.^| Urban Female
<.^| 50-54 >.^| 11.70 >.^| 8.70 >.^| 15.40 >.^| 8.40
<.^| 55-59 >.^| 18.10
                  >.^| 11.70
                               >.^| 24.30
                                           >.^| 13.60
                  >.^| 20.30
                               >.^| 37.00
<.^| 60-64 >.^| 26.90
                                           >.^| 19.30
>.^| 35.10
                                           >.^| 50.00
|-----
```

Table 2 VADeaths								
	Rural Male	Rural Female	Urban Male	Urban Female				
50-54	11.70	8.70	15.40	8.40				
55-59	18.10	11.70	24.30	13.60				
60-64	26.90	20.30	37.00	19.30				
65-69	41.00	30.90	54.60	35.10				
70-74	66.00	54.30	71.10	50.00				

5.3 data.frame

```
> ascii(iris[1:10, ], include.rownames = F, caption = "iris", width = 75,
+ align = "c", valign = "bottom", frame = "topbot", grid = "none")
.iris
[frame="topbot", grid="none", valign="bottom", options="header", width="75%"]
^.>| Sepal.Length ^.>| Sepal.Width ^.>| Petal.Length ^.>| Petal.Width ^.>| \leftrightarrow
  Species
^.>| 5.10
               ^.>| 3.50
                              ^.>| 1.40
                                              ^.>| 0.20
                                                             ^.>| setosa
                             ^.>| 1.40
^.>| 4.90
               ^.>| 3.00
                                              ^.>| 0.20
                                                             ^.>| setosa
                             ^.>| 1.30
                                             ^.>| 0.20
                                                            ^.>| setosa
^.>| 4.70
               ^.>| 3.20
                             ^.>| 1.50
                                             ^.>| 0.20
                                                            ^.>| setosa
^.>| 4.60
               ^.>| 3.10
^.>| 5.00
              ^.>| 3.60
                             ^.>| 1.40
                                             ^.>| 0.20
                                                            ^.>| setosa
              ^.>| 3.90
                             ^.>| 1.70
                                                            ^.>| setosa
^.>| 5.40
                                             ^.>| 0.40
                                                            ^.>| setosa
^.>| 4.60
              ^.>| 3.40
                             ^.>| 1.40
                                             ^.>| 0.30
               ^.>| 3.40
                                                            ^.>| setosa
^.>| 5.00
                             ^.>| 1.50
                                             ^.>| 0.20
^.>| 4.40
               ^.>| 2.90
                             ^.>| 1.40
                                             ^.>| 0.20
                                                             ^.>| setosa
                             ^.>| 1.50
                                              ^.>| 0.10
^.>| 4.90
              ^.>| 3.10
                                                            ^.>| setosa
```

5.4 row (and col) headings

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.10	3.50	1.40	0.20	setosa
4.90	3.00	1.40	0.20	setosa
4.70	3.20	1.30	0.20	setosa
4.60	3.10	1.50	0.20	setosa
5.00	3.60	1.40	0.20	setosa
5.40	3.90	1.70	0.40	setosa
4.60	3.40	1.40	0.30	setosa
5.00	3.40	1.50	0.20	setosa
4.40	2.90	1.40	0.20	setosa
4.90	3.10	1.50	0.10	setosa

10	10	9.96 6.75	0 50	1 4 02 1	1 30
16					
19					
31					
51		· · · · ·			
52					
63					
78					
79					
86					
(all)					
.13+.^s Treatment: 2 3		· · · · ·			
10					
15					
16					
19					
31					
51					
52					
63					
78					
79					
86					
(all)					
.13+.^s Treatment: 3 3					
10					
15					
16					
19					
31					
51					
52					
63 8.06 0.07 0.12 6.18 3.10 78 4.00 0.70 0.67 1.19 3.52 79 7.73 0.57 0.12 1.18 0.03 86 3.87 1.63 0.94 4.11 3.03					
78					2.66
79					
86 3.87 1.63 0.94 4.11 3.03					
(all) 6.97 1.72 0.68 3.87 2.53	86	3.87 1.63	0.94	4.11	3.03
	(all)	6.97 1.72	0.68	3.87	2.53
	======				

Treatment	subject	potato	buttery	grassy	rancid	painty
	3	6.22	0.37	0.19	2.11	3.11
	10	9.96	6.75	0.58	4.02	1.38
	15	3.36	0.72	0.42	3.96	3.26
	16	6.50	3.26	0.76	4.12	1.23
	19	9.38	3.06	2.02	5.36	2.77
Tuantunanta	31	8.84	0.44	0.09	5.94	3.21

Treatment:

1

5 ASCII EXAMPLES 5.5 summary.table

Treatment	subject	potato	buttery	grassy	rancid	painty
	51	10.68	2.64	1.05	5.15	1.96
	52	5.06	0.81	0.88	4.29	2.65
	63	6.78	0.03	0.00	6.05	3.85
	78	3.62	0.73	0.54	1.50	3.49
	79	8.06	0.28	0.34	0.57	0.00
	86	4.18	1.77	0.81	5.49	4.11
	(all)	6.89	1.78	0.65	4.07	2.58
	3	6.74	0.59	0.11	3.14	2.48
	10	9.99	6.98	0.47	2.15	0.82
	15	4.41	1.31	0.34	2.29	2.06
	16	6.45	3.37	1.05	3.40	0.46
	19	8.64	2.45	1.14	5.41	4.16
Treatment:	31	8.03	0.62	0.16	6.05	5.06
2	51	9.98	3.79	1.57	4.67	2.25
_	52	5.51	1.02	1.18	4.22	2.19
	63	8.41	0.10	0.01	5.09	4.36
	78	3.78	0.29	0.76	1.55	2.73
	79	7.94	0.69	0.26	1.03	0.00
	86	3.99	2.06	0.78	4.52	2.84
	(all)	7.00	1.97	0.66	3.62	2.46
	3	5.29	0.77	0.09	2.86	2.87
	10	10.03	6.45	0.14	3.11	0.69
	15	3.96	0.99	0.44	2.55	2.37
	16	6.86	2.70	1.12	3.20	0.56
	19	8.74	1.73	2.07	7.24	3.90
Treatment:	31	9.03	0.65	0.17	6.58	5.13
3	51	10.22	3.13	1.35	4.92	2.54
	52	5.47	0.86	0.77	3.16	2.66
	63	8.06	0.07	0.12	6.18	3.10
	78	4.00	0.70	0.67	1.19	3.52
	79	7.73	0.57	0.12	1.18	0.03
	86	3.87	1.63	0.94	4.11	3.03
	(all)	6.97	1.72	0.68	3.87	2.53

5.5 summary.table

```
> ascii(summary(table(1:4, 1:4)))
* Number of cases in table: 4
* Number of factors: 2
* Test for independence of all factors:
** Chisq = 12, df = 9, p-value = 0.2133
** Chi-squared approximation may be incorrect
```

- Number of cases in table: 4
- Number of factors: 2
- Test for independence of all factors:
 - Chisq = 12, df = 9, p-value = 0.2133
 - Chi-squared approximation may be incorrect

5.6 labeled list

```
> ascii(version)
platform::
    i486-pc-linux-gnu
```

5 ASCII EXAMPLES 5.7 glm

```
arch::
 i486
os::
 linux-gnu
system::
 i486, linux-gnu
status::
major::
 2
minor::
 9.2
year::
 2009
month::
 08
day::
 24
svn rev::
 49384
language::
 R
version.string::
 R version 2.9.2 (2009-08-24)
```

```
platform i486-pc-linux-gnu
arch i486
os linux-gnu
system i486, linux-gnu
status, major 2
minor 9.2
year 2009
month 08
day 24
svn rev 49384
language R
version.string R version 2.9.2 (2009-08-24)
```

5.7 glm

```
> counts <- c(18, 17, 15, 20, 10, 20, 25, 13, 12)> outcome <- g1(3, 1, 9)> \leftrightarrow
   treatment <- gl(3, 3) > d.AD <- data.frame(treatment, outcome, counts) > <math>glm. \leftrightarrow
   D93 <- glm(counts ~ outcome + treatment, family = poisson())> glm.D93
Call: glm(formula = counts ~ outcome + treatment, family = poisson())
Coefficients:
(Intercept)
              outcome2
                            outcome3 treatment2 treatment3
  3.045e+00 -4.543e-01 -2.930e-01
                                        8.717e-16
                                                      4.557e-16
Degrees of Freedom: 8 Total (i.e. Null); 4 Residual
Null Deviance: 10.58
Residual Deviance: 5.129
                                AIC: 56.76
> ascii(glm.D93, caption = "glm.D93")
.glm.D93
```

5 ASCII EXAMPLES 5.8 describe

```
[options="header"]
      | Estimate | Std. Error | z value | Pr(>\|z\|)
                            | 17.81 | 0.00
| -2.25 | 0.02
| -1.52 | 0.12
| (Intercept) | 3.04 | 0.17 | outcome2 | -0.45 | 0.20 | outcome3 | -0.29 | 0.19 | treatment2 | 0.00 | 0.20 | treatment3 | 0.00 | 0.20
                               | -1.52
                                        | 0.13
                                0.00
                                | 0.00 | 1.00
| 0.00 | 1.00
|-----
> ascii(anova(glm.D93), caption = "anova glm.D93", include.rownames = T)
.anova glm.D93
[options="header"]
|-----
         | Df | Deviance | Resid. Df | Resid. Dev
|-----
```

Table 4 glm.D93

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	3.04	0.17	17.81	0.00
outcome2	-0.45	0.20	-2.25	0.02
outcome3	-0.29	0.19	-1.52	0.13
treatment2	0.00	0.20	0.00	1.00
treatment3	0.00	0.20	0.00	1.00

Table 5 anova glm.D93

	Df	Deviance	Resid. Df	Resid. Dev
NULL			8.00	10.58
outcome	2.00	5.45	6.00	5.13
treatment	2.00	0.00	4.00	5.13

5.8 describe

5 ASCII EXAMPLES 5.8 describe

```
| n | missing | unique
      | 4
| 88 | 0
|-----
0-39g/day (23, 26%), 40-79 (23, 26%), 80-119 (21, 24%), 120+ (21, 24%)
*tobgp : Tobacco group*
| n | missing | unique
| 88 | 0 | 4
|-----
0-9g/day (24, 27%), 10-19 (24, 27%), 20-29 (20, 23%), 30+ (20, 23%)
*ncases*
|-----
| n | missing | unique | Mean | .05 | .10 | .25 | .50 | .75 | .90 | .95
| 88 | 0 | 10 | 2.273 | 0.0 | 0.0 | 0.0 | 1.0 | 4.0 | 5.3 | 6.0
   | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 8 | 9 | 17
| Frequency | 29 | 16 | 11 | 9 | 8 | 6 | 5 | 1 | 2 | 1
| % | 33 | 18 | 12 | 10 | 9 | 7 | 6 | 1 | 2 | 1
|-----
*ncontrols : Number of control*
|-----
| n | missing | unique | Mean | .05 | .10 | .25 | .50 | .75 | .90 | .95
| 88 | 0 | | 30 | | 11.08 | 1.0 | 1.0 | 3.0 | 6.0 | 14.0 | 29.1 | 40.0
lowest: 1 2 3 4 5, highest: 40 46 48 49 60
*age : Age [Years] *
|-----
| n | missing | unique
| 88 | 0 | 6
|----
|-----
   | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75+
| Frequency | 15 | 15 | 16 | 16 | 15 | 11 | % | 17 | 18 | 18 | 17 | 12
|-----
```

ESOPH

- 6 Variable
- 88 Observations

agegp: Age group

n	missing	unique
88	0	6

5 ASCII EXAMPLES 5.9 plot

	25-34	35-44	45-54	55-64	65-74	75+
Frequency	15	15	16	16	15	11
%	17	17	18	18	17	12

alcgp: Alcohol group

n	missing	unique
88	0	4

0-39g/day (23, 26%), 40-79 (23, 26%), 80-119 (21, 24%), 120+ (21, 24%)

tobgp: Tobacco group

n	missing	unique
88	0	4

0-9g/day (24, 27%), 10-19 (24, 27%), 20-29 (20, 23%), 30+ (20, 23%) ncases

n	missing	unique	Mean	.05	.10	.25	.50	.75	.90	.95
88	0	10	2.273	0.0	0.0	0.0	1.0	4.0	5.3	6.0

	0	1	2	3	4	5	6	8	9	17
Frequer	1c 3 /9	16	11	9	8	6	5	1	2	1
%	33	18	12	10	9	7	6	1	2	1

ncontrols: Number of control

n	missing	unique	Mean	.05	.10	.25	.50	.75	.90	.95
88	0	30	11.08	1.0	1.0	3.0	6.0	14.0	29.1	40.0

lowest: 1 2 3 4 5, highest: 40 46 48 49 60

age: Age [Years]

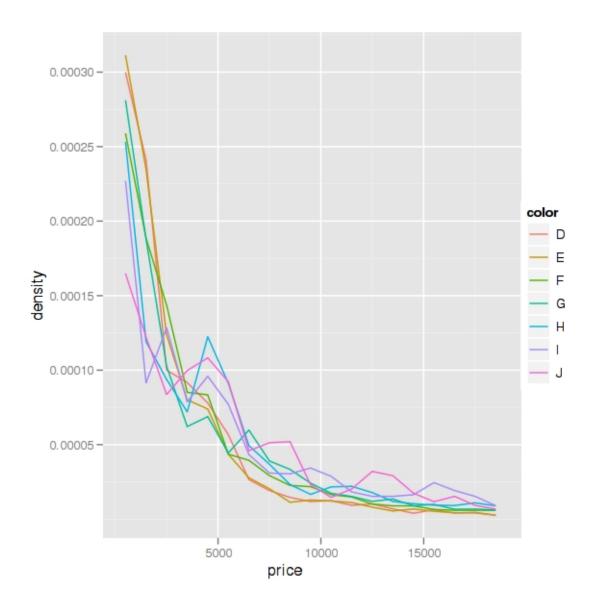
n	missing	unique
88	0	6

	25-34	35-44	45-54	55-64	65-74	75+
Frequency	15	15	16	16	15	11
%	17	17	18	18	17	12

5.9 plot

> library(ggplot2)> p <- qplot(price, ..density.., data = diamonds, geom = " ↔
 freqpoly",
+ binwidth = 1000, colour = color)> print(p)

5 ASCII EXAMPLES 5.10 other outputs



5.10 other outputs

```
> library(reshape)> names(airquality) < tolower(names(airquality))> agm < melt( \leftrightarrow
   airquality, id = c("month", "day"), na.rm = TRUE)> res <- cast(aqm, month \sim \leftrightarrow
   month
    5 23.61538 181.2963 11.622581 65.54839
     6 29.44444 190.1667 10.266667 79.10000
     7 59.11538 216.4839 8.941935 83.90323
     8 59.96154 171.8571 8.793548 83.96774
     9 31.44828 167.4333 10.180000 76.90000
6 (all) 42.12931 185.9315 9.957516 77.88235
> print(ascii(res), "t2t")
|| month | ozone | solar.r | wind | temp |
    | 23.62 | 181.30 | 11.62 | 65.55 |
| 5
      | 29.44 | 190.17 | 10.27 | 79.10 |
| 6
      | 59.12 | 216.48 | 8.94 | 83.90 |
| 7
1 8
      | 59.96 | 171.86 | 8.79 | 83.97 |
                       | 10.18 | 76.90 |
       | 31.45 | 167.43
1 9
| (all) | 42.13 | 185.93 | 9.96 | 77.88 |
> print(ascii(res), "sphinx")
+----+
| month | ozone | solar.r | wind | temp |
```

		+======= 181.30		
		190.17	•	
7	59.12	216.48	8.94	83.90
8	59.96	171.86	8.79	83.97
9	31.45	167.43	10.18	76.90
(all)	42.13	185.93	9.96	77.88
· print(a	ascii(res	+s), "org") +		
month	ozone	solar.r	wind	temp
		181.30		
6	29.44	190.17	10.27	79.10
7	59.12	216.48	8.94	83.90
8	59.96	171.86	8.79	83.97
9	31.45	167.43	10.18	76.90
(all)	42.13	185.93	9.96	77.88
l	+		+	

6 convert

Sweave process creates a yourdocument.xxx file from yourdocument.Rnw.

```
Sweave("youdocument.Rnw", RweaveXxx)
```

You can convert it to html format with the following command:

```
asciidoc yourdocument.txt
or
txt2tags -t html yourdocument.t2t
or
sphinx-build -b html . youdocument # need a conf.py file
or
Alt-X org-export-as-html
```

or to other formats...

For example, you can see the source of this documentation, the file generated by Sweave, the same file in docbook format, the same file converted to pdf with dblatex, and the same file converted to odt with docbook2odf.

7 more informations

- asciidoc: http://www.methods.co.nz/asciidoc
- txt2tags: http://txt2tags.sourceforge.net
- sphinx: http://sphinx.pocoo.org/
- org-mode: http://orgmode.org/

8 ascii for real

• Derek H. Ogle has written some vignettes for the book 'Analysis and Interpretation of Freshwater Fisheries Data' using ascii.

- This blog uses ascii and blogpost to generate and publish post.
- This blog too but with another method.