

ConTEXT

ConTEXT User Module

Fancybreak

Wolfgang Schuster

April 18, 2015

Fancybreak

Examples

\fancybreak

The \fancybreak command

```
Making oil requires a specific series of geological accidents ...
\fancybreak{*$ * *$}
Making oil requires a specific series of geological accidents ...
```

results in

Making oil requires a specific series of geological accidents over inconceivable amounts of time. First, organic-rich sediment needs to be buried faster than it can decay. Then the stuff needs to get pushed miles down into the earth’s crust to be cooked slowly. Buried too deep or cooked too fast and the organic molecules burn off; trapped too shallow or not for long enough and the muck never turns into oil. Finally, an impermeable layer needs to seal the oil in a porous layer of rock from which it can be recovered. Then somebody has to find it and get it out of the ground. It takes millions of years to produce a barrel of oil; we use millions of barrels a day. There is no question that we will run out of oil — the only question is when.

* * *

Making oil requires a specific series of geological accidents over inconceivable amounts of time. First, organic-rich sediment needs to be buried faster than it can decay. Then the stuff needs to get pushed miles down into the earth’s crust to be cooked slowly. Buried too deep or cooked too fast and the organic molecules burn off; trapped too shallow or not for long enough and the muck never turns into oil. Finally, an impermeable layer needs to seal the oil in a porous layer of rock from which it can be recovered. Then somebody has to find it and get it out of the ground. It takes millions of years to produce a barrel of oil; we use millions of barrels a day. There is no question that we will run out of oil — the only question is when.

spacebefore

spaceafter

The “spacebefore” and “spaceafter” keys

```
\setupfancybreak[spacebefore=line,spaceafter=line]
```

```
The Earth, as a habitat for animal life, is in old age ...
\fancybreak{*$ * *$}
The Earth, as a habitat for animal life, is in old age ...
```

results in

The Earth, as a habitat for animal life, is in old age and has a fatal illness. Several, in fact. It would be happening whether humans had ever evolved or not. But our presence is like the effect of an old-age patient who smokes many packs of cigarettes per day — and we humans are the cigarettes.

* * *

The Earth, as a habitat for animal life, is in old age and has a fatal illness. Several, in fact. It would be happening whether humans had ever evolved or not. But our presence is like the effect of an old-age patient who smokes many packs of cigarettes per day — and we humans are the cigarettes.

style

The “style” key

```
\setupfancybreak[style=bold]
```

```
The warm water spills north and south through a series of ocean currents
...

```

```
\fancybreak{* * *}
```

```
The warm water spills north and south through a series of ocean currents
...

```

The warm water spills north and south through a series of ocean currents that mirror to some degree the cells in the atmosphere above the water. Like the atmospheric cells, for instance, these giant oceanic gears —called gyres— fall under the influence of the winds and the Coriolis effect and form loops that move water first away from the equator, then parallel, and then back to rejoin the equatorial currents. The familiar Gulf Stream is one of these gyres, and because of its unique characteristics it has particular salience to the fortunes of many civilizations.

* * *

The warm water spills north and south through a series of ocean currents that mirror to some degree the cells in the atmosphere above the water. Like the atmospheric cells, for instance, these giant oceanic gears —called gyres— fall under the influence of the winds and the Coriolis effect and form loops that move water first away from the equator, then parallel, and then back to rejoin the equatorial currents. The familiar Gulf Stream is one of these gyres, and because of its unique characteristics it has particular salience to the fortunes of many civilizations.

color

The “color” key

```
\setupfancybreak[color=red]
```

```
Had our solar system included two suns, the problem would ...

```

```
\fancybreak{* * *}
```

```
Had our solar system included two suns, the problem would ...

```

Had our solar system included two suns, the problem would have involved three bodies (the two suns and each planet), and chaos would have been immediately obvious. Planets would have had erratic and unpredictable orbits, and creatures living on one of these planets would never have been able to perceive the slightest harmony. Nor would it

have occurred to them that the universe might be ruled by laws and that it is up to man’s intellect to discover them. Besides, it is not at all obvious that life and conscience could even emerge in such a chaotic system.

* * *

Had our solar system included two suns, the problem would have involved three bodies (the two suns and each planet), and chaos would have been immediately obvious. Planets would have had erratic and unpredictable orbits, and creatures living on one of these planets would never have been able to percieve the slightest harmony. Nor would it have occurred to them that the universe might be ruled by laws and that it is up to man’s intellect to discover them. Besides, it is not at all obvious that life and conscience could even emerge in such a chaotic system.

indentnext

The “indentnext” key

The Earth, as a habitat for animal life, is in old age ...

`\fancybreak{$* * *$}`

The Earth, as a habitat for animal life, is in old age ...

`\fancybreak[indentnext=no]{$* * *$}`

The Earth, as a habitat for animal life, is in old age ...

The Earth, as a habitat for animal life, is in old age and has a fatal illness. Several, in fact. It would be happening whether humans had ever evolved or not. But our presence is like the effect of an old-age patient who smokes many packs of cigarettes per day — and we humans are the cigarettes.

* * *

The Earth, as a habitat for animal life, is in old age and has a fatal illness. Several, in fact. It would be happening whether humans had ever evolved or not. But our presence is like the effect of an old-age patient who smokes many packs of cigarettes per day — and we humans are the cigarettes.

* * *

The Earth, as a habitat for animal life, is in old age and has a fatal illness. Several, in fact. It would be happening whether humans had ever evolved or not. But our presence is like the effect of an old-age patient who smokes many packs of cigarettes per day — and we humans are the cigarettes.

\fancybreak

The argumentless version of the `\fancybreak` command

Imagine trying to live in a world dominated by dihydrogen oxide ...

`\fancybreak`

Imagine trying to live in a world dominated by dihydrogen oxide ...

Imagine trying to live in a world dominated by dihydrogen oxide, a compound that has no taste or smell and is so viable in its properties that it is generally benign but at other times swiftly lethal. Depending on its state, it can scald you or freeze you. In the presence of certain organic molecules it can form carbonic acids so nasty that they

Fancybreak

can strip the leaves from trees and eat the faces off statuary. In bulk, when agitated, it can strike with a fury that no human edifice could withstand. Even for those who have learned to live with it, it is often murderous substance. We call it water.

Imagine trying to live in a world dominated by dihydrogen oxide, a compound that has no taste or smell and is so viable in its properties that it is generally benign but at other times swiftly lethal. Depending on its state, it can scald you or freeze you. In the presence of certain organic molecules it can form carbonic acids so nasty that they can strip the leaves from trees and eat the faces off statuary. In bulk, when agitated, it can strike with a fury that no human edifice could withstand. Even for those who have learned to live with it, it is often murderous substance. We call it water.

spaceinbetw..

The “spaceinbetween” key

```
\setupfancybreak[spaceinbetween=3*line]
```

```
If [in 2600] you stacked all the new books being published ...
```

```
\fancybreak
```

```
If [in 2600] you stacked all the new books being published ...
```

If [in 2600] you stacked all the new books being published next to each other, you would have to move at ninety miles an hour just to keep up with the end of the line. Of course, by 2600 new artistic and scientific work will come in electronic forms, rather than as physical books and paper. Nevertheless, if the exponential growth continued, there would be ten papers a second in my kind of theoretical physics, and no time to read them.

If [in 2600] you stacked all the new books being published next to each other, you would have to move at ninety miles an hour just to keep up with the end of the line. Of course, by 2600 new artistic and scientific work will come in electronic forms, rather than as physical books and paper. Nevertheless, if the exponential growth continued, there would be ten papers a second in my kind of theoretical physics, and no time to read them.

symbol

The “symbol” key

```
\setupfancybreak[symbol=star]
```

```
This nation, turning 100 years old, had no {\em Odyssey}, ...
```

```
\fancybreak
```

```
This nation, turning 100 years old, had no {\em Odyssey}, ...
```

This nation, turning 100 years old, had no *Odyssey*, no St. George slaying the dragon, no Prometheus. The emerging American genius for making a lot of money was a poor

substitute for King Arthur and his knights (although the Horatio Alger myth of rags to riches was good for a lot of mileage). Without a mythology and set of ancient heroes to call its own, America had to manufacture its heroes. So the mythmaking machinery of nineteenth-century American media created a suitable heroic archetype in the cowboys of the Wild West. The image was of the undaunted cattle drivers living a life of reckless individualism, braving the elements, staving off brutal Indian attacks. Or of heroic lawmen dueling with six-guns in the streets at high noon. This artificial Wild West became America's Iliad.

*

This nation, turning 100 years old, had no *Odyssey*, no St. George slaying the dragon, no Prometheus. The emerging American genius for making a lot of money was a poor substitute for King Arthur and his knights (although the Horatio Alger myth of rags to riches was good for a lot of mileage). Without a mythology and set of ancient heroes to call its own, America had to manufacture its heroes. So the mythmaking machinery of nineteenth-century American media created a suitable heroic archetype in the cowboys of the Wild West. The image was of the undaunted cattle drivers living a life of reckless individualism, braving the elements, staving off brutal Indian attacks. Or of heroic lawmen dueling with six-guns in the streets at high noon. This artificial Wild West became America's Iliad.

The fancybreak environment

```
\useMPlibrary[txt]
```

```
\setupMPvariables[EnglishRule][width=.6\hsize]
```

```
\setupfancybreak[spacebefore=line,spaceafter=line]
```

```
The Earth, as a habitat for animal life, is in old age ...
```

```
\startfancybreak
```

```
\dontleavehmode\useMPgraphic{EnglishRule}
```

```
\stopfancybreak
```

```
The Earth, as a habitat for animal life, is in old age ...
```

The Earth, as a habitat for animal life, is in old age and has a fatal illness. Several, in fact. It would be happening whether humans had ever evolved or not. But our presence is like the effect of an old-age patient who smokes many packs of cigarettes per day — and we humans are the cigarettes.

The Earth, as a habitat for animal life, is in old age and has a fatal illness. Several, in fact. It would be happening whether humans had ever evolved or not. But our presence

Fancybreak

is like the effect of an old-age patient who smokes many packs of cigarettes per day — and we humans are the cigarettes.

`\definefancy..`

How to create new `\fancybreak` commands

```
\definefancybreak[starbreak] [symbol=star]
\definefancybreak[squarebreak][symbol=square]
```

The Earth, as a habitat for animal life, is in old age ...

`\starbreak`

The Earth, as a habitat for animal life, is in old age ...

`\squarebreak`

The Earth, as a habitat for animal life, is in old age ...

The Earth, as a habitat for animal life, is in old age and has a fatal illness. Several, in fact. It would be happening whether humans had ever evolved or not. But our presence is like the effect of an old-age patient who smokes many packs of cigarettes per day — and we humans are the cigarettes.

*

Imagine trying to live in a world dominated by dihydrogen oxide, a compound that has no taste or smell and is so viable in its properties that it is generally benign but at other times swiftly lethal. Depending on its state, it can scald you or freeze you. In the presence of certain organic molecules it can form carbonic acids so nasty that they can strip the leaves from trees and eat the faces off statuary. In bulk, when agitated, it can strike with a fury that no human edifice could withstand. Even for those who have learned to live with it, it is often murderous substance. We call it water.

□

Coming back to the use of typefaces in electronic publishing: many of the new typographers receive their knowledge and information about the rules of typography from books, from computer magazines or the instruction manuals which they get with the purchase of a PC or software. There is not so much basic instruction, as of now, as there was in the old days, showing the differences between good and bad typographic design. Many people are just fascinated by their PC's tricks, and think that a widely-praised program, called up on the screen, will make everything automatic from now on.

Implementation

```

1 \writestatus{loading}{ConTeXt User Module / Fancybreak}
2 \unprotect
3 \startinterface all
4   \setinterfacevariable {fancybreak} {fancybreak}
5 \stopinterface
6 \installnamespace {fancybreak}
7 \installnamespace {fancybreakalternative}
8 \installnamespace {fancybreakrenderings}
9 \installcommandhandler \????fancybreak           {fancybreak}           \????fanc
10 \installcommandhandler \????fancybreakalternative {fancybreakalternative}
    \????fancybreakalternative

```

\setupfancyb..

\setupfancybreak

With the command `\setupfancybreak` one can change the settings of a previous created command, the two argument version change only the values of a certain command while the one argument version change the values of all commands.

```

\setupfancybreak [1...] [OPT...,2...,...]
1 IDENTIFIER
2 spacebefore    = inherits from \blank
  spaceafter     = inherits from \blank
  spaceinbetween = inherits from \blank
  align          = inherits from \setupalign
  indentnext     = yes no auto
  symbol         = IDENTIFIER
  style          = normal bold slanted boldslanted type cap small... COMMAND
  color          = IDENTIFIER

```

\definefancy..

\definefancybreak

The command `\fancybreak` is not hardcoded in the module but created with `\definefancybreak`. The command takes two arguments, the first is the name of the new command and the second parameter to change the style of the commands content and distances to the surrounding text.

In MkII users can only change the spacing before and after the content and the alignment of it while MkIV user can also change the style and color of it.

Fancybreak

```
\definefancybreak [...1.] [...OPT,2.,...]
```

1 IDENTIFIER

2 *inherits from* \setupfancybreak

11 \appendtoks

12 \setuevalue {\currentfancybreak}{\fancybreak [\currentfancybreak]}%

13 \setuevalue{\e!start\currentfancybreak}{\startfancybreak[\currentfancybreak]}%

14 \setuevalue{\e!stop \currentfancybreak}{\stopfancybreak }%

15 \to \everydefinefancybreak

\fancybreak

\fancybreak

The main macro of the module is the `\fancybreak` command (or a user defined variant of it), it takes one argument which can be optional.

```
\FANCYBREAK [...OPT,1.,...] {2.}
```

1 *inherits from* \setupfancybreak

2 CONTENT

```
\startFANCYBREAK [...OPT,*.,... ] ... \stopFANCYBREAK
```

* *inherits from* \setupfancybreak

16 \definefancybreakalternative [\s!default] [\c!renderingsetup=\????fancybreakrendering]

17 \startsetups[\????fancybreakrenderings:\s!default]

18 \blank[\fancybreakparameter\c!spacebefore]

19 \flushnextbox

20 \blank[\fancybreakparameter\c!spaceafter]

21 \stopsetups

22 \definefancybreakalternative [\v!test] [\c!renderingsetup=\????fancybreakrenderings]

23 \startsetups[\????fancybreakrenderings:\v!test]

24 \setbox\scratchboxone\vbox{\blank[\fancybreakparameter\c!spacebefore]}

25 \setbox\scratchboxtwo\vbox{\blank[\fancybreakparameter\c!spaceafter]}

26 \ifzeropt\pagetotal

27 % begin of new page

28 \else

29 \ifdim\dimexpr\pagegoal-\pagetotal\relax<\dimexpr\nextboxhtdp+\ht\scratchboxone

30 \page % not enough space for the content

31 \else

```

32     \texsetup{\????fancybreakrenderings:\s!default}
33     \fi
34     \fi
35 \stopsetups

36 \definefancybreakalternative [\v!auto] [\c!renderingsetup=\????fancybreakrenderings
37 \startsetups[\????fancybreakrenderings:\v!auto]
38     \setexpandedfancybreakparameter\c!spacebefore{\the\dimexpr\nextboxhtdp/2\relax}
39     \setexpandedfancybreakparameter\c!spaceafter {\the\dimexpr\nextboxhtdp
\relax}
40     \texsetup{\????fancybreakrenderings:\v!test}
41 \stopsetups

42 \unexpanded\def\fancybreak
43     {\par
44     \begingroup
45     \dodoubleempty\fancybreak_direct}

46 \def\fancybreak_direct
47     {\ifsecondargument
48     \expandafter\fancybreak_direct_double
49     \else\iffirstargument
50     \doubleexpandafter\fancybreak_direct_single
51     \else
52     \doubleexpandafter\fancybreak_direct_zero
53     \fi\fi}

54 \def\fancybreak_direct_double[#environment][#parameters]%
55     {\edef\currentfancybreak{#environment}%
56     \ifcsname\currentfancybreakhash\s!parent\endcsname
57     % the current environment does exist
58     \else
59     \let\currentfancybreak\empty
60     \fi
61     \doifassignmentelse{#parameters}
62     {\setupcurrentfancybreak[#parameters]}
63     {\setfancybreakparameter\c!spaceinbetween{#parameters}}%
64     \doifnextbgroupelse\fancybreak_direct_yes\fancybreak_direct_nop}

65 \def\fancybreak_direct_single[#environment][#parameters]%
66     {\doifassignmentelse{#environment}
67     {\let\currentfancybreak\empty
68     \setupcurrentfancybreak[#environment]}
69     {\edef\currentfancybreak{#environment}%
70     \ifcsname\currentfancybreakhash\s!parent\endcsname
71     % the argument is the name of a environment

```

Fancybreak

```
72     \else
73     \let\currentfancybreak\empty
74     \setfancybreakparameter\c!spaceinbetween{#parameters}
75     \fi}%
76     \doifnextbgroupelse\fancybreak_direct_yes\fancybreak_direct_nop}

77 \def\fancybreak_direct_zero[#environment][#parameters]%
78   {\let\currentfancybreak\empty
79   \doifnextbgroupelse\fancybreak_direct_yes\fancybreak_direct_nop}

80 \def\fancybreak_direct_yes
81   {\forgetparindent
82   \dowithnextboxcontent
83     {\dostarttagged\t!division\currentfancybreak
84     \usealignparameter\fancybreakparameter
85     \usefancybreakstyleandcolor\c!style\c!color}
86     {\edef\currentfancybreakalternative{\fancybreakparameter\c!alternative}%
87     \ifcsname\currentfancybreakalternativehash\s!parent\endcsname
88       % valid argument for the alternative key
89     \else
90       \let\currentfancybreakalternative\s!default
91     \fi
92     \edef\p_fancybreak_renderingsetup{\fancybreakalternativeparameter\c!rendering
93     \texsetup\p_fancybreak_renderingsetup
94     \dostoptagged
95     \checknextindentation[\fancybreakparameter\c!indentnext]%
96     \endgroup
97     \dorechecknextindentation}
98     \vbox}

99 \def\fancybreak_direct_nop
100   {\doifsymboldefinedelse{\fancybreakparameter\c!symbol}
101   {\fancybreak_direct_yes{\symbol[\fancybreakparameter\c!symbol]}}
102   {\blank[\fancybreakparameter\c!spaceinbetween]%
103   \checknextindentation[\fancybreakparameter\c!indentnext]%
104   \endgroup
105   \dorechecknextindentation}}

106 \unexpanded\def\startfancybreak
107   {\par
108   \begingroup
109   \dodoubleempty\fancybreak_start}

110 \def\fancybreak_start
111   {\ifsecondargument
112     \expandafter\fancybreak_start_double
113     \else\iffirstargument
```

```

114     \doubleexpandafter\fancybreak_start_single
115     \else
116     \doubleexpandafter\fancybreak_start_zero
117     \fi\fi}

118 \def\fancybreak_start_double[#environment][#parameters]%
119 {\edef\currentfancybreak{#environment}%
120  \ifcsname\currentfancybreakhash\s!parent\endcsname
121   % the current environment does exist
122  \else
123   \let\currentfancybreak\empty
124  \fi
125  \setupcurrentfancybreak[#parameters]%
126  \fancybreak_direct_yes\bgroup}

127 \def\fancybreak_start_single[#environment][#parameters]%
128 {\doifassignmentelse{#environment}
129  {\let\currentfancybreak\empty
130   \setupcurrentfancybreak[#parameters]}
131  {\edef\currentfancybreak{#environment}%
132   \ifcsname\currentfancybreakhash\s!parent\endcsname
133    % the current environment does exist
134   \else
135    \let\currentfancybreak\empty
136   \fi}%
137  \fancybreak_direct_yes\bgroup}

138 \def\fancybreak_start_zero[#environment][#parameters]%
139 {\let\currentfancybreak\empty
140  \fancybreak_direct_yes\bgroup}

141 \unexpanded\def\stopfancybreak
142  {\egroup}

143 \setupfancybreak
144  [ \c!spacebefore=,
145    \c!spaceafter=\v!nowhite,
146    \c!spaceinbetween=\v!line,
147    \c!align=\v!middle,
148    \c!indentnext=\v!yes,
149    \c!symbol=]

150 \protect \endinput

```

Fancybreak

color 3

indentnext 4

spaceafter 2

spacebefore 2

spaceinbetween 5

style 3

symbol 5

`\definefancybreak` 7, 8

`\fancybreak` 2, 4, 9

`\setupfancybreak` 8

`\startfancybreak` 6