ConTExt

ConTExt User Module
Fancybreak

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Fancybreak
Examples

The \fancybreak command

\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. Burried 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.

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The “spacebefore” and “spaceafter” keys

\setupfancybreak[spacebefore=line,spaceafter=line]

\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.
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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 “color” key

\setupfancybreak[color=red]

Had our solar system included two suns, the problem would ...
\fancybreak{* * *}

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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
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could even emerge in such a chaotic system.

The “indentnext” key

\indentnext\texttt{\textbackslash fancybreak\{\$* * *\}}
The Earth, as a habitat for animal life, is in old age …
\indentnext\texttt{\textbackslash fancybreak\{indentnext=no\}\{$* * *\}}
The Earth, as a habitat for animal life, is in old age …
\indentnext\texttt{\textbackslash fancybreak}
The Earth, as a habitat for animal life, is in old age …

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The argumentless version of the \texttt{\textbackslash fancybreak} command

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

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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.

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 \em 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.

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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 …

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How to create new \fancybreak commands

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

\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 ...

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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.
Fancybreak

Implementation

\writestatus{loading}{ConTeXt User Module / Fancybreak}
\unprotect
\startinterface all
  \setinterfacevariable {fancybreak} {fancybreak}
\stopinterface
\installnamespace {fancybreak}
\installnamespace {fancybreakalternative}
\installnamespace {fancybreakrenderings}
\installcommandhandler \????fancybreak \????fancybreakalternative {fancybreak}
\setupfancybreak...

\setupfancybreak [...] [...,=,...]
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
\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 [\ldots] [.\ldots,\ldots]
1 \texttt{IDENTIFIER}
2 \textit{inherits from} \texttt{\setupfancybreak}

\appendtoks
12 \setuevalue{\currentfancybreak}{\fancybreak\currentfancybreak}
13 \setuevalue{\e!start\currentfancybreak}{\startfancybreak\currentfancybreak}
14 \setuevalue{\e!stop\currentfancybreak}{\stopfancybreak}
15 \texttt{to} \everydefinefancybreak

\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 [\ldots,\ldots] \{\ldots\}
1 \texttt{inherits from} \texttt{\setupfancybreak}
2 \texttt{CONTENT}

\startFANCYBREAK [\ldots,\ldots] \ldots \stopFANCYBREAK
1 \texttt{inherits from} \texttt{\setupfancybreak}

\definefancybreakalternative [\s!default] \{\c!renderingsetup=\ldots\fancybreakrenderings:\s!default\}
16 \startsetups[\ldots\fancybreakrenderings:\s!default]
17 \texttt{\blank}[\fancybreakparameter\c!spacebefore]
18 \flushnextbox
19 \texttt{\blank}[\fancybreakparameter\c!spaceafter]
20 \stopsetups

\definefancybreakalternative [\v!test] \{\c!renderingsetup=\ldots\fancybreakrenderings:\v!test\}
23 \startsetups[\ldots\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+\ht\scratchboxtwo\relax
30 \page \% not enough space for the content
31 \else

\texttt{ConT\textvisiblespace eXt User Module}
\textsetup{\???fancybreakrenderings:s!default}
\fi
\fi
\stopsetups
\definefancybreakalternative [\v!auto] [\c!renderingsetup=\???fancybreakrenderings:s]
\startsetups[\???fancybreakrenderings:s]
\setexpandedfancybreakparameter\c!spacebefore{\the\dimexpr\nextboxhtdp/2\relax}
\setexpandedfancybreakparameter\c!spaceafter{\the\dimexpr\nextboxhtdp\relax}
\texsetup{\???fancybreakrenderings:s!test}
\stopsetups
\unexpanded\def\fancybreak
{\par
 \begingroup
 \dodoubleempty\fancybreak_direct
 \def\fancybreak_direct
{\ifsecondargument
 \expandafter\fancybreak_direct_double
 \else\iffirstargument
 \doubleexpandafter\fancybreak_direct_single
 \else
 \doubleexpandafter\fancybreak_direct_zero
 \fi\fi}
\def\fancybreak_direct_double[#environment][#parameters]%
{\edef\currentfancybreak[#environment]%
 \ifcsname\currentfancybreakhash\s!parent\endcsname
 \% the current environment does exist
 \else
 \let\currentfancybreak\empty
 \fi
 \doifassignmentelse{#parameters}
 {\setupcurrentfancybreak[#parameters]}
 {\setfancybreakparameter\c!spaceinbetween{#parameters}}%
 \doifnextbgroupelse\fancybreak_direct_yes\fancybreak_direct_nop}
\def\fancybreak_direct_single[#environment][#parameters]%
{\doifassignmentelse{#environment}
 {\let\currentfancybreak\empty
 \setupcurrentfancybreak[#environment]}
 {\edef\currentfancybreak[#environment]%
 \ifcsname\currentfancybreakhash\s!parent\endcsname
 \% the argument is the name of a environment
 \else
 \let\currentfancybreak\empty
 \setupcurrentfancybreak[#environment]}
 \doifassignmentelse{#parameters}
 {\setupcurrentfancybreak[#parameters]}
 {\setfancybreakparameter\c!spaceinbetween{#parameters}}%
 \doifnextbgroupelse\fancybreak_direct_single\fancybreak_direct_nop}
Fancybreak

```latex
\else
    \let\currentfancybreak\empty
    \setfancybreakparameter{c!spaceinbetween}{#parameters}
    \fi
\}
doifnextbgroupelse\fancybreak_direct_yes\fancybreak_direct_nop
\def\fancybreak_direct_zero[#environment][#parameters]%
    \doifnextbgroupelse\fancybreak_direct_yes\fancybreak_direct_nop
\def\fancybreak_direct_yes
    \forgetparindent
    \dowithnextboxcontent
    \dostarttagged\t!division\currentfancybreak
    \usealignparameter{\fancybreakparameter}
    \usefancybreakstyleandcolor{c!style}{c!color}
    \edef\currentfancybreakalternative{\fancybreakparameter}
    \ifcsname\currentfancybreakalternativehash\endcsname
        \else
            \let\currentfancybreakalternative\s!default
        \fi
    \edef\p_fancybreak_renderingsetup{\fancybreakalternativeparameter}
    \texsetup\p_fancybreak_renderingsetup
    \dostoptagged
    \checknextindentation{\fancybreakparameter}
    \endgroup
    \dorechecknextindentation}
\vbox}
\def\fancybreak_direct_nop
    \doifsymboldefinedelse{\fancybreakparameter}
    {\fancybreak_direct_yes{\symbol[\fancybreakparameter]}}
    {\blank{\fancybreakparameter}{\fancybreakparameter}}
    \checknextindentation{\fancybreakparameter}
    \endgroup
    \dorechecknextindentation}
\unexpanded\def\startfancybreak
    {\par
        \begingroup
        \dodoubleempty\fancybreak_start}
\def\fancybreak_start
    {\ifsecondargument
        \expandafter\fancybreak_start_double
        \else\iffirstargument
```

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\def\fancybreak_start_double[#environment][#parameters]{}\edef\currentfancybreak{#environment}\ifcsname\currentfancybreakhash!parent\endcsname\else\let\currentfancybreak\empty\fi\setupcurrentfancybreak[#parameters]\fancybreak_direct_yes\bgroup
\def\fancybreak_start_single[#environment][#parameters]{\doifassignmentelse{#environment}{\let\currentfancybreak\empty\setupcurrentfancybreak[#parameters]}{\edef\currentfancybreak{#environment}\ifcsname\currentfancybreakhash!parent\endcsname\else\let\currentfancybreak\empty\fi}\fancybreak_direct_yes\bgroup
\def\fancybreak_start_zero[#environment][#parameters]{\let\currentfancybreak\empty\fancybreak_direct_yes\bgroup
\unexpanded\def\stopfancybreak{\egroup}
\setupfancybreak{\c!spacebefore=,\c!spaceafter=\v!nowhite,\c!spaceinbetween=\v!line,\c!align=\v!middle,\c!indentnext=\v!yes,\c!symbol=}
\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