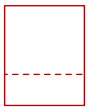
box traNsfoRmationS in pdf-trans.tex

before

after

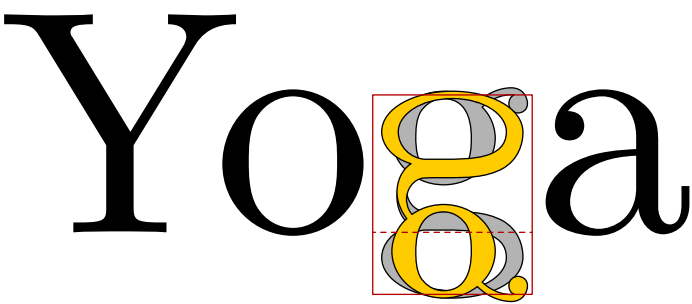


bounding box

P.Jackowski@gust.org.pl

\boxflipx <box>

\boxflipx



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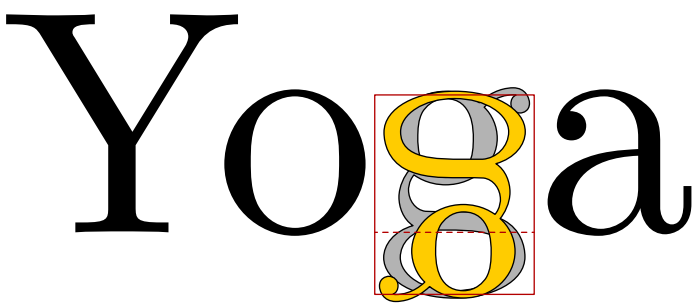

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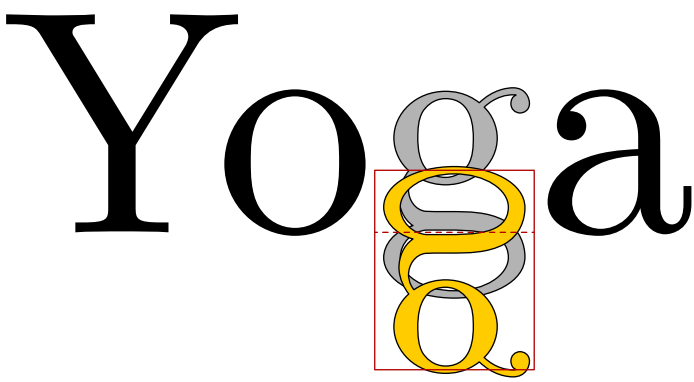

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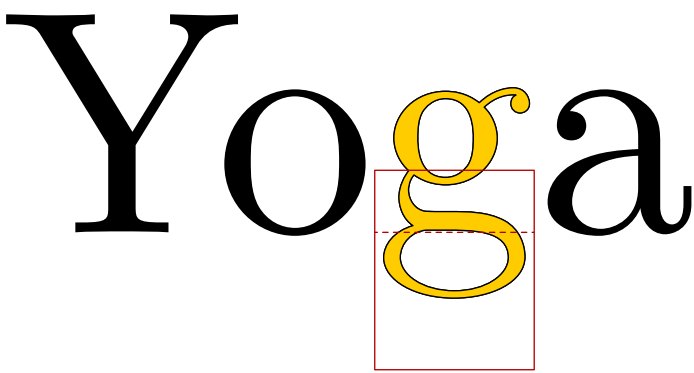
\boxflipbase




```
\bboxtrans {<trans>} <box>
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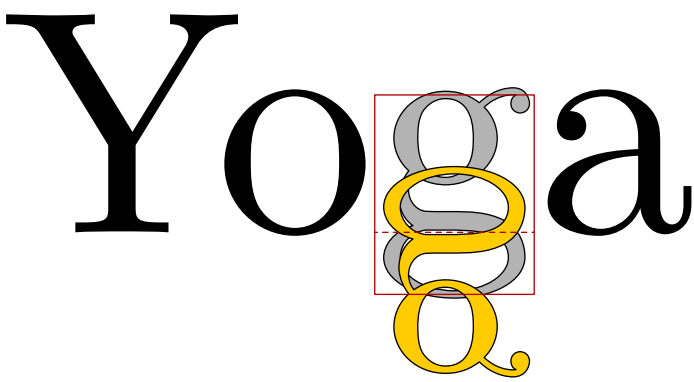
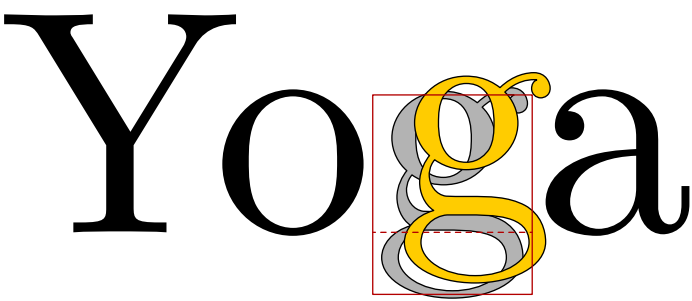
```
\bboxtrans \boxflipbase
```



`\cboxtrans {<trans>} <box>`

`\cboxtrans \boxflipbase`



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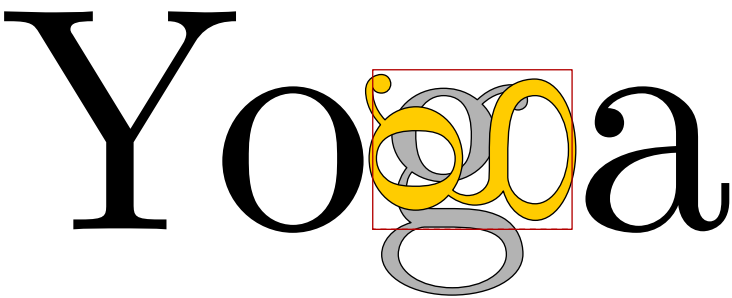
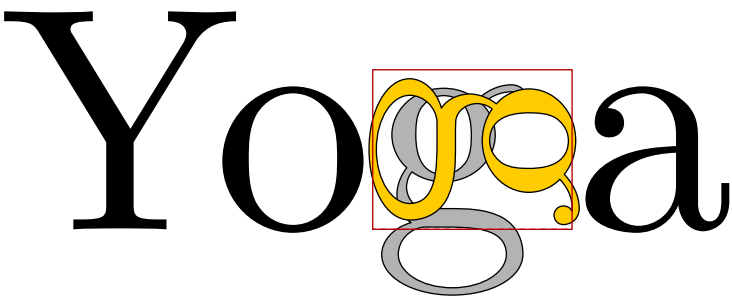
\boxtranslate {3mm}{2mm}



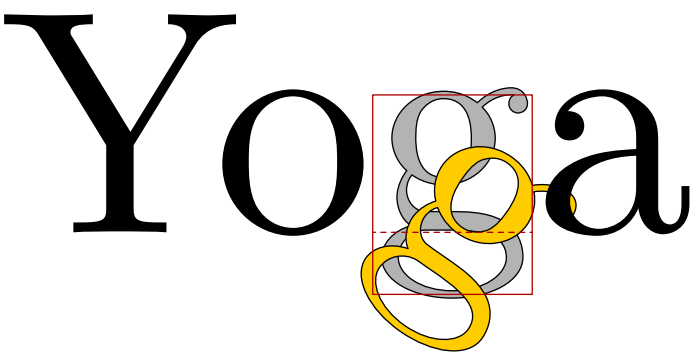
\boxrevolveleft <box>

\boxrevolveleft



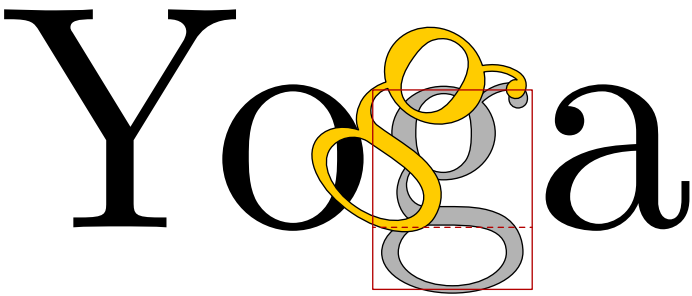
\boxrevolveright <box>

\boxrevolveright



\boxrotate {<angle>} <box>

\boxrotate {394.7}



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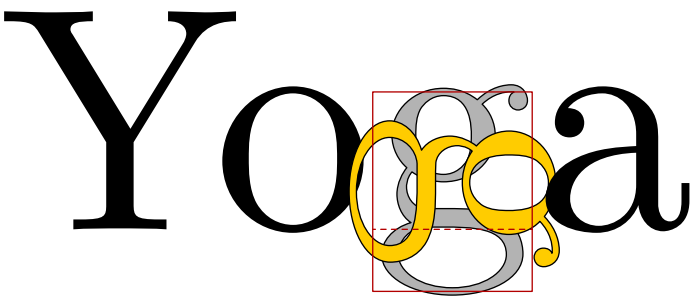
\boxrotatexy {34.2}{\wd \transbox }{\ht \transbox }



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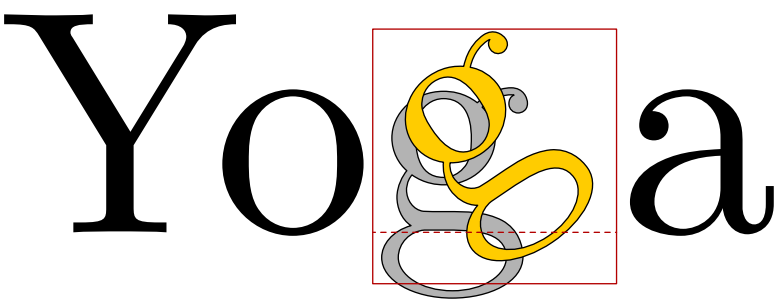
\boxrotatec {90}



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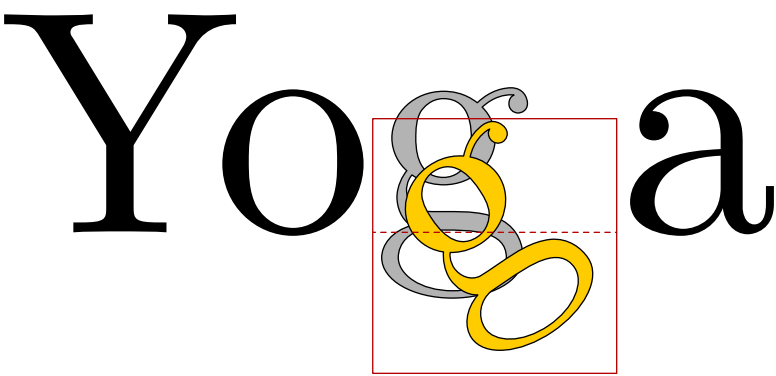
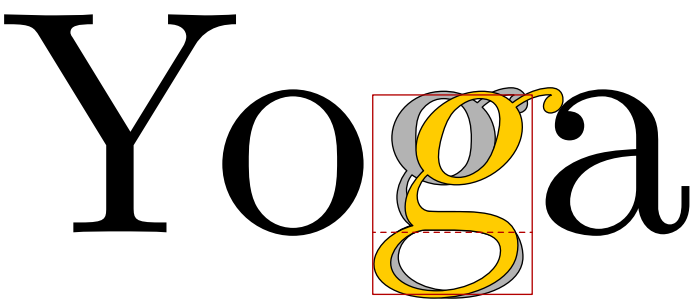
\boxrotatebbl {-34.1}



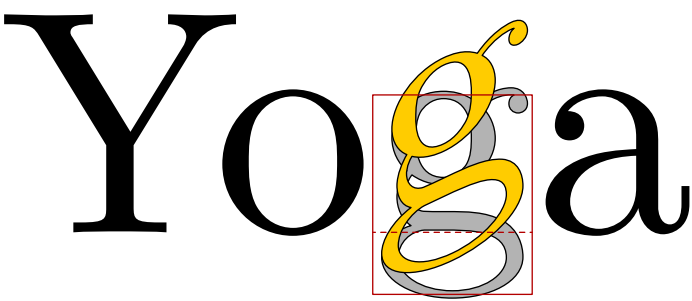
\boxrotatebbr {<angle>} <box>

\boxrotatebbr {-34.2}



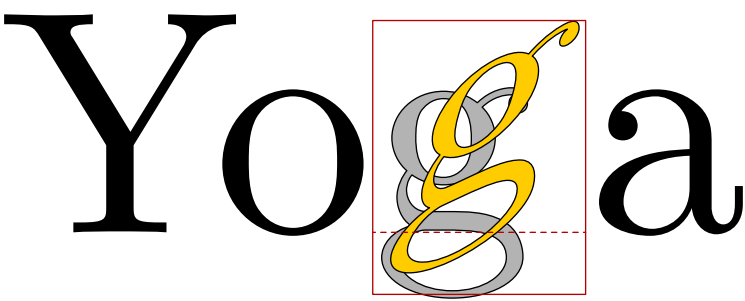
\boxslantx {<angle>} <box>

\boxslantx {15.2}



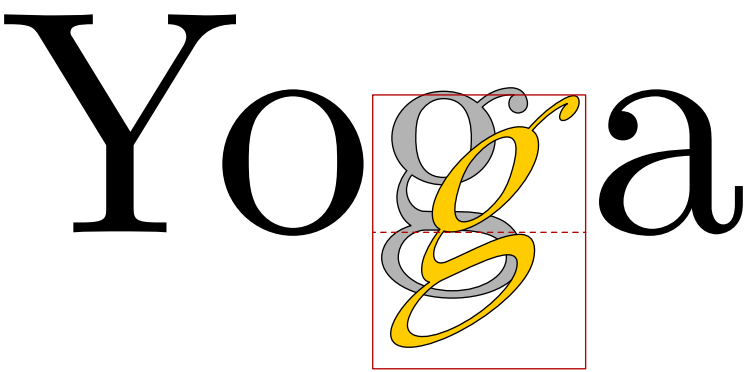
`\boxslanty {<angle>} <box>`

`\boxslanty {25.3}`



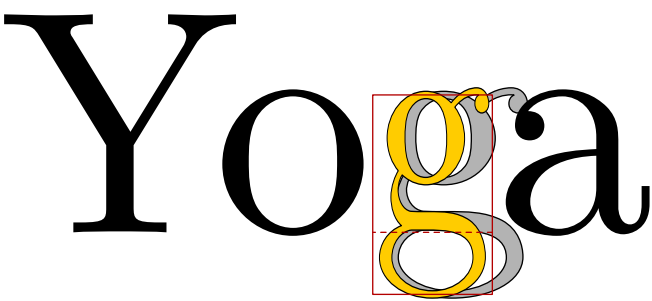
\boxslantbbl {<angle>}{<angle>} <box>

\boxslantbbl {15}{25}



\boxslantbbr {<angle>}{<angle>} <box>

\boxslantbbr {15}{25}



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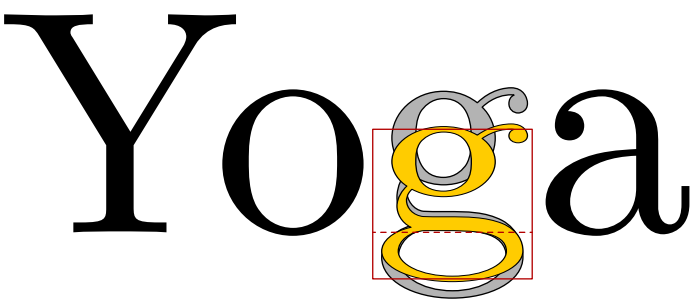
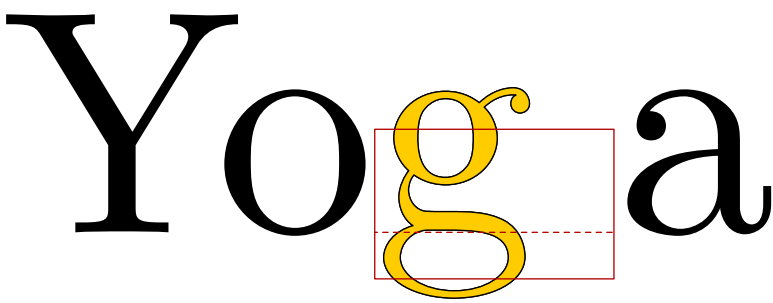
\boxscalex {75}



`\boxscaley {<numexpr>} <box>`

`\boxscaley {75}`

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\cboxtransoff \boxscalexy {150}{75}
```

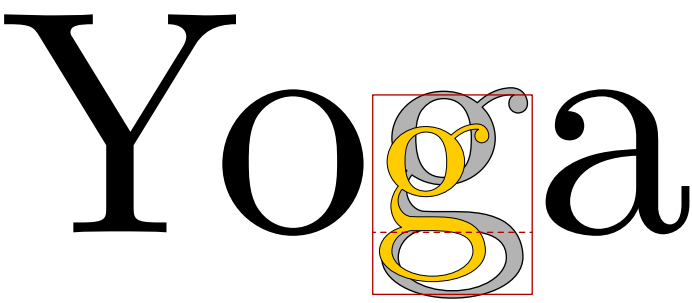

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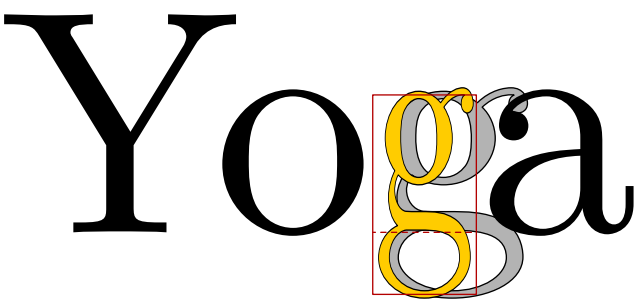
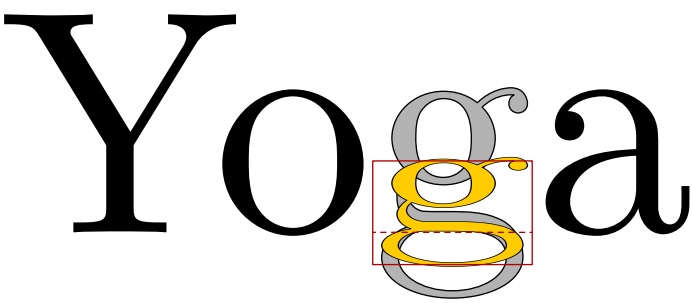
`\bboxtransoff \boxscale {75}`



`\boxscalexto {<dimexpr>} <box>`

`\boxscalexto {.5in+.1cm}`



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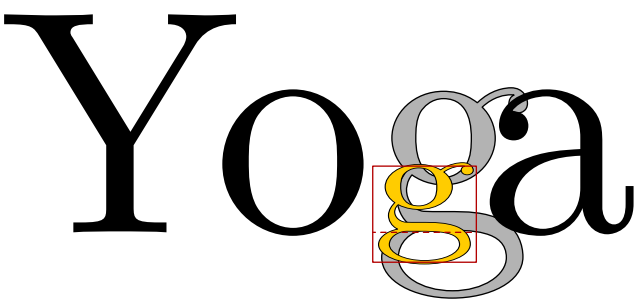
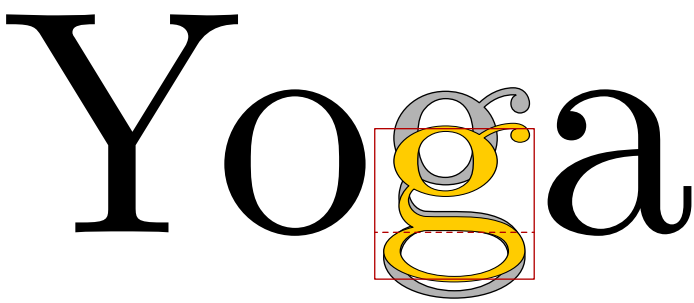
`\boxscaleyto {.5in+.1cm}`



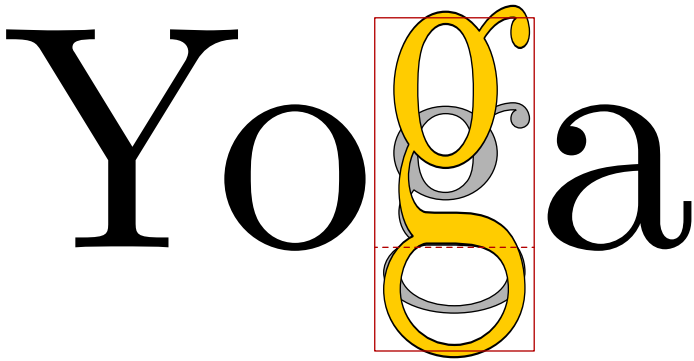
\boxscalexyto {<dimxpr>}{<dimexpr>} <box>

\boxscalexyto {.5in+.1cm}{1in/2}



`\boxscalehtto {<dimexpr>} <box>`

`\boxscalehtto {.5in+.1cm}`



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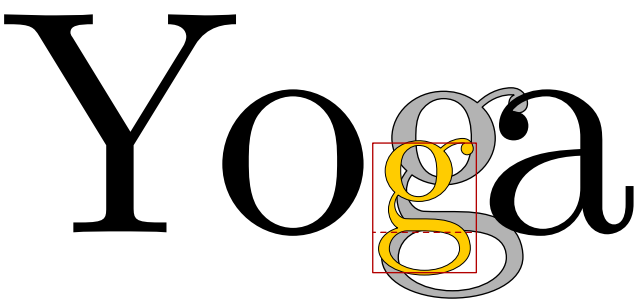
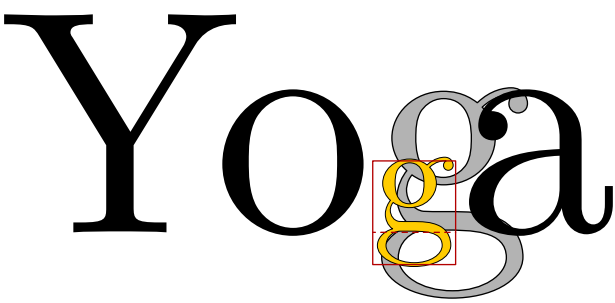
\boxscaledpto {.5in+.1cm}



\boxuniscalexto {<dimexpr>} <box>

\boxuniscalexto {.5in+.1cm}



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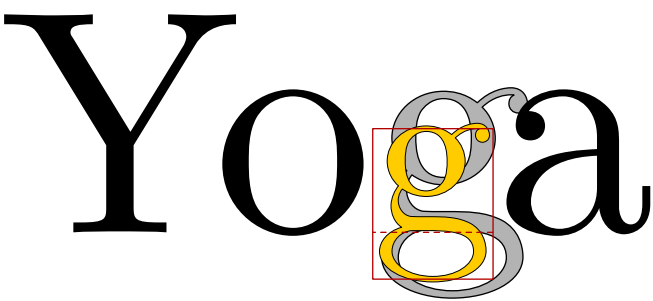

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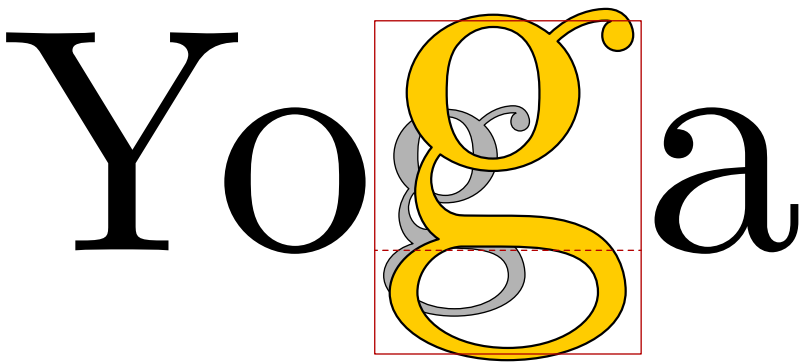

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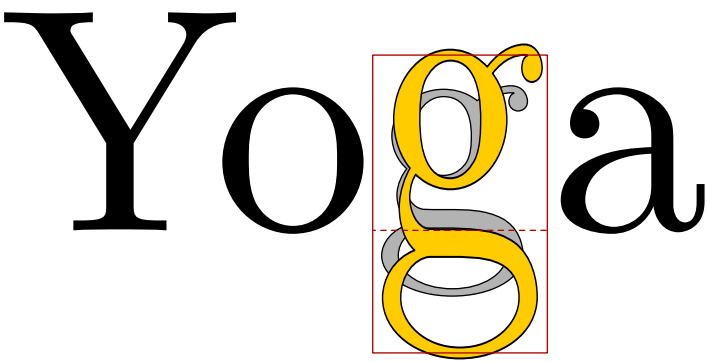
\boxuniscaledpto {.5in+.1cm}



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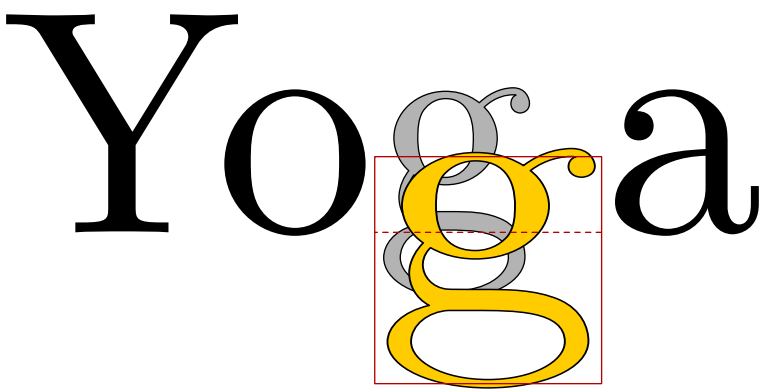
\boxextscale {2mm}{5mm}{8mm}



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\boxextscaleto {<dimexpr>}{<dimexpr>}{<dimexpr>} <box>
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\boxextscaleto {3cm}{1cm}{2cm}
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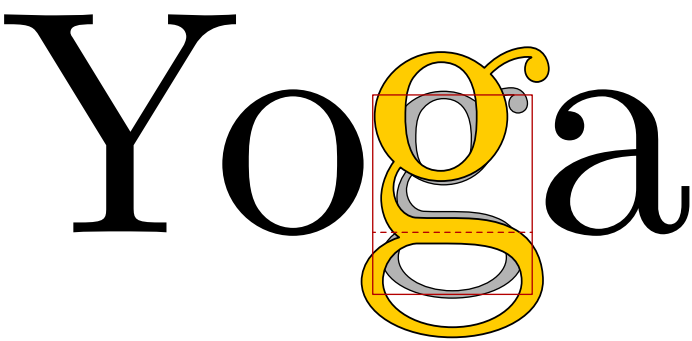
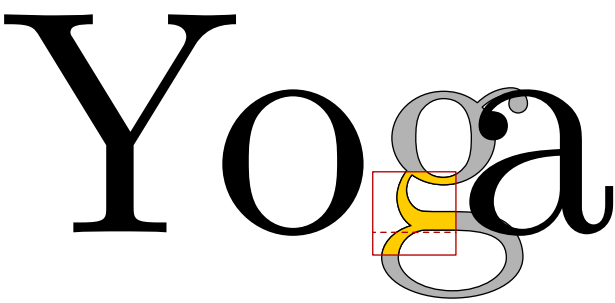


\boxexts {<dimexpr>}{<dimexpr>}{<dimexpr>}{<dimexpr>} <box>

\boxexts {3mm}{3mm}{5mm}{5mm}

`\boxextents {<dimexpr>}{<dimexpr>}{<dimexpr>}{<dimexpr>} <box>`

`\boxextents {2mm}{4mm}{6mm}{8mm}`




```
\boxxformspec resources{/Foo /Bar} \boxxform  <box>
```

```
\boxxformspec resources{\the \pdfpageresources } \boxxform \boxresizeto {11mm}{8mm}{3mm}
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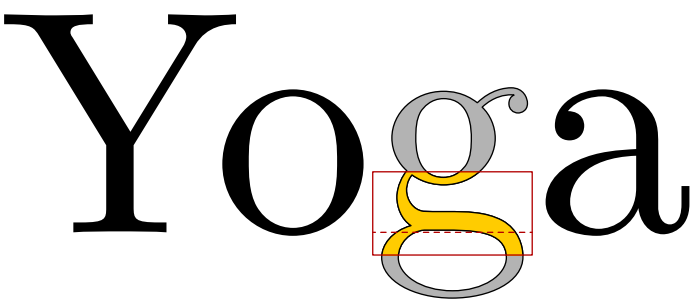
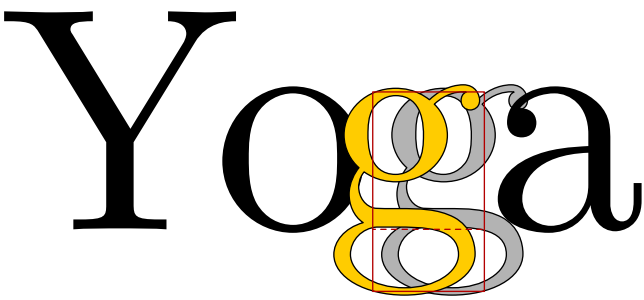


\boxclip <box>

\boxclip \boxresizeto {}{8mm}{3mm}



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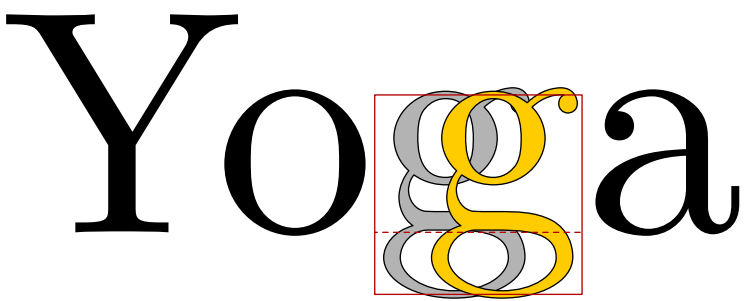
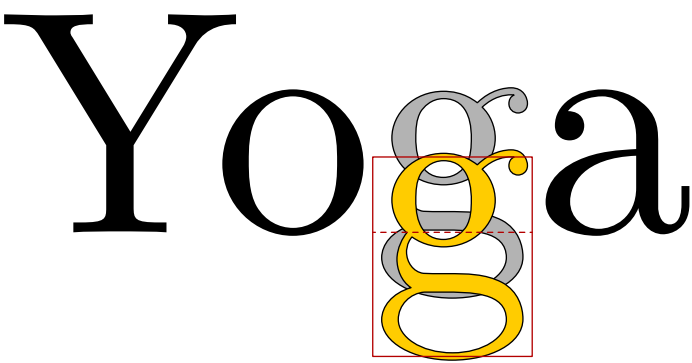
\boxmoveleft {.3\wd \transbox }



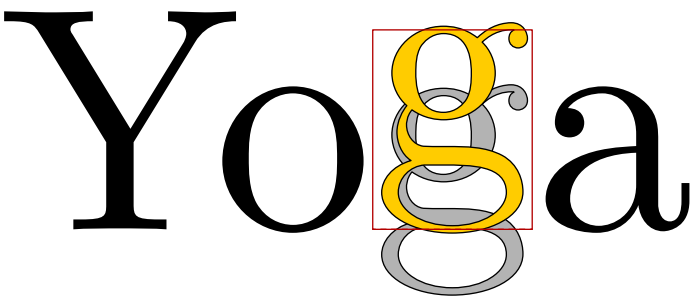
\boxmoveright {<dimexpr>} <box>

\boxmoveright {.3\wd \transbox }



`\boxlower {<dimexpr>} <box>`

`\boxlower {\dp \transbox }`



`\boxraise {<dimexpr>} <box>`

```
\boxraise {\dp \transbox }
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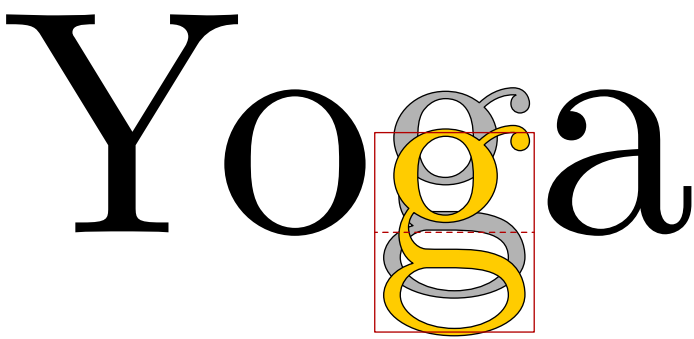
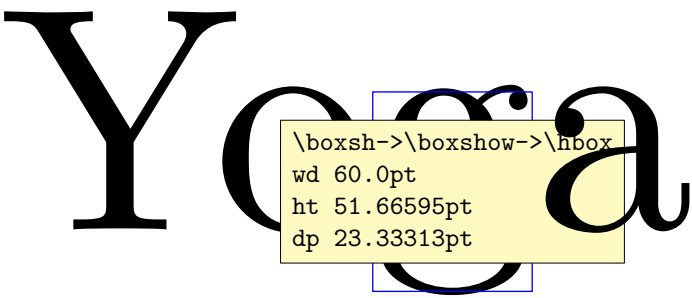


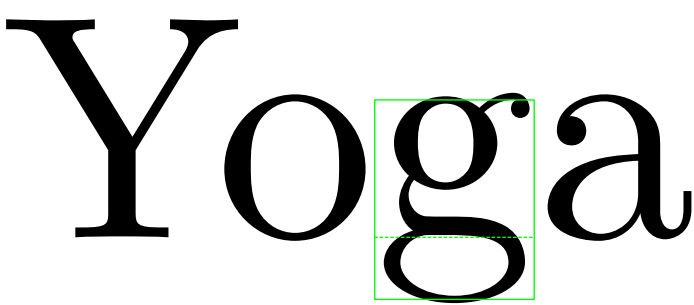
\boxbaselineat {<numexpr>} <box>

\boxbaselineat {50}



`\boxinfo <box>`

`\boxinfo \boxsh`



`\boxshow {<gsspec>}{<gsspec>}{<gsspec>} <box>`

`\boxshow {0 1 0 RG}{[1 1]0 d}{}`

`\boxmarkers {<dimexpr>}{<dimexpr>}{<gsspec>} <box>`

`\boxmarkers {-12pt}{3pt}{1 0 0 RG 1 J}`

\boxpath {<gsspec>}{<paintop>} <box>

\boxpath {3 w .7 0 0 rg 1 .8 0 RG}{B}\bboxtrans {\boxextscale {3mm}{3mm}{3mm}}\boxmoveright {3mm}

\boxroundpath {<dimexpr>}{<gsspec>}{<paintop>} <box>

\boxroundpath {4mm}{3 w .7 0 0 rg 1 .8 0 RG}{B}\boxextent {3mm}

\boxedgypath {<dimexpr>}{<gsspec>}{<paintop>} <box>

\boxedgypath {4mm}{3 w .7 0 0 rg 1 .8 0 RG}{B}\boxextent {3mm}

Each transformation expands to <box> (\hbox in most cases).
Each transformation must be followed by a <box>.

<box> states for any kind of TEX box; \hbox, \vbox, \vtop, \box, \copy
<trans> is a list of box transformations
<dimexpr> states for dimen in eTeX form
<numexpr> states for integer in eTeX form
<angle> is an integer or float-like string
<gsspec> is a literal pdf content stream
<paintop> means pdf painting operator (S, f, B, W...)

See the code for more.