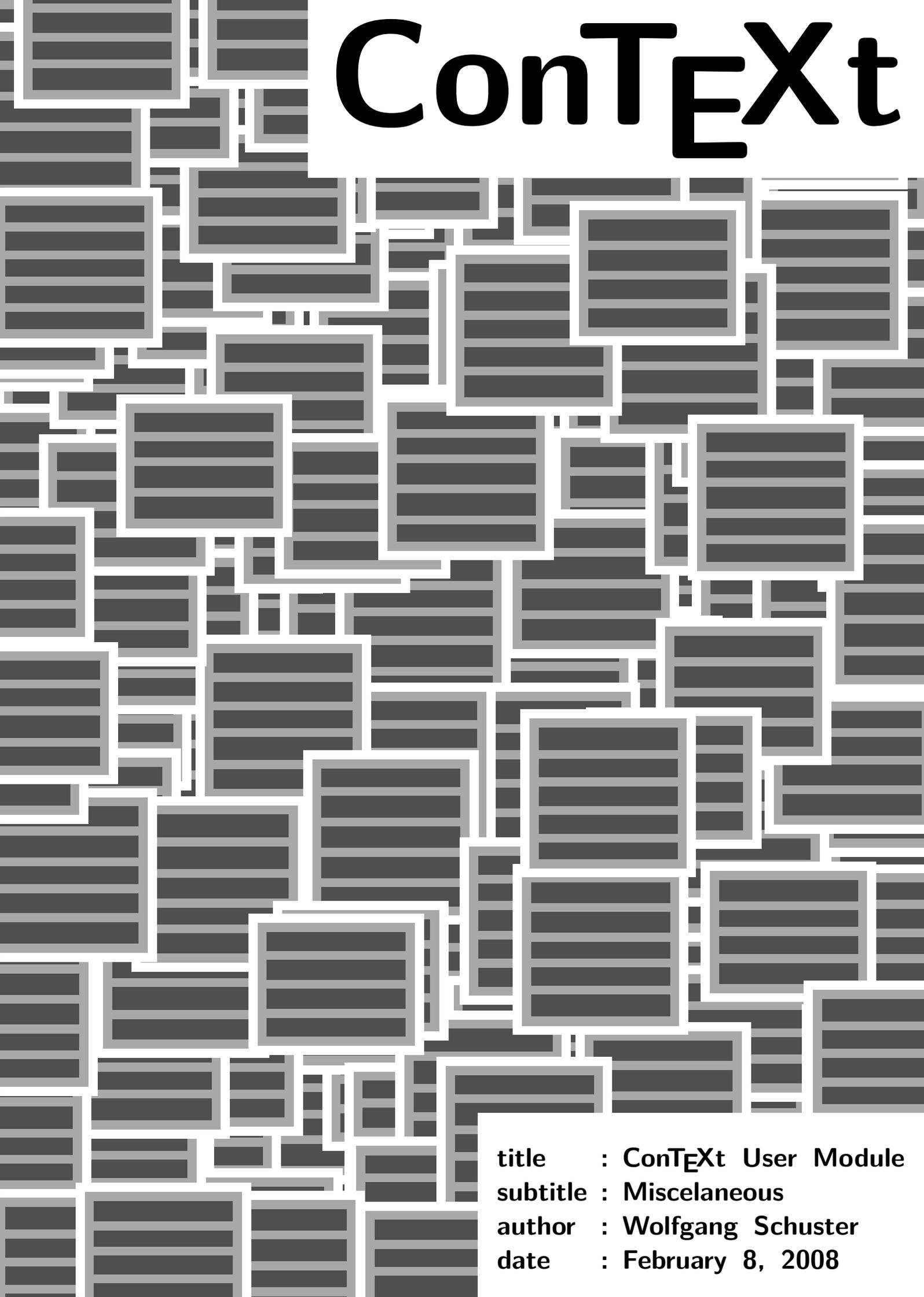


ConTEXTt



title : ConTEXTt User Module
subtitle : Miscelaneous
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```

1 \writestatus{loading}{Context User Module / Miscellaneous}
2 \unprotect
3 \def\????ac{@@@ac} % ACcount

```

This is the second version of my T-Account module. If I want to be true I wrote this module the n-th time but the current version is my second version that has all things implemented that I wanted and is written as a real `CONTEXT` module and in a simple plain `TEX` style, although it is sometimes better to try writing things for plain `TEX` and creating an extended for `CONTEXT` later, after everything works.

The next two count registers save the values for the values from the `\debit` and `\credit` macros. You can output the values at the end of the account.

```

4 \newcount\!!creditsum
  \newcount\!!debitsum

```

The following dimens are needed to save the textwidth in the first run with my account parser and feed these values into the account boxes, most of them only needed for the `width=fit` option.

```

5 \newdimen\!!debitwidth
  \newdimen\!!debitheight
  \newdimen\!!creditwidth
  \newdimen\!!creditheight
  \newdimen\!!accountwidth
  \newdimen\!!accountheight
  \newdimen\!!debittextwidth
  \newdimen\!!debitnumberwidth
  \newdimen\!!credittextwidth
  \newdimen\!!creditnumberwidth

```

I collect the content from the debit environment in an box and put the content into the main box, after all values are collected. The same happens for the credit environment and his content.

```

6 \newbox\debitbox
  \newbox\creditbox

```

And the last thing is a private token register to save the account content and use it for both parsing the content and using it afterwards to fill the box with the processed content.

```

7 \newtoks\accounttoks

```

This nice thing was taken from `core-rul.tex`.

```

8 \def\accountparameter#1%
   {\csname\@account#1\endcsname}

```

```

\startACCOUNT [.1.] [.,.2.,...] ... \stopACCOUNT
                        OPTIONAL

```

```

1 IDENTIFIER
2 inherits from \setupACCOUNT

```

```

\startAC..
\stopACC..

```

My first version used a buffers to store the content between the `\startACCOUNT ... \stopACCOUNT` pair. This has worked until I tried to put the environment into a float or to put a few of them side

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by side in an `combination` environment. A solution for this problems could have been to call the output from my `ACCOUNT` environment by a command like `\useACCOUNT` like the `MPgraphics`, but is was not what I wanted and the only solution for this was to use an delimited environment on the one side or collect the text into braces like `\ACCOUNT` on the other side. The second way would have made it easier to define new macros to for the account with presets with the sideeffect to enclose the content with braces. The first way avoids braces and uses `delimitercommands` instead, more to write and harder to define wrapper macros (in the way I like) but I preferred this solution as shown below.

```
9 \def\startACCOUNT
  {\dodoubleempty\dostartACCOUNT}
10 \long\def\dostartACCOUNT[#1][#2]#3\stopACCOUNT
  {\bgroup
  \edef\@account{\????ac#1}%
  \ifsecondargument
    \setupACCOUNT[#1][#2]%
  \fi
  \edef\accountwidth {\accountparameter\c!width}%
  \edef\accountdistance {\accountparameter\c!distance}%
  \!!creditsum\zeropoint
  \!!debitsum\zeropoint
  \def\creditsum{\the\!!creditsum}%
  \def\debitsum {\the\!!debitsum}%
  \doifvaluesomething{\accountparameter\c!bodyfont}
    {\expanded{\switchtobodyfont
      [\accountparameter\c!bodyfont]}}%
  \parseACCOUNT{#3}
  \doifnot\accountwidth\v!fit
    {\global\!!accountwidth\the\dimexpr\accountwidth\relax
    \global\advance\!!accountwidth-\accountdistance
    \global\!!accountwidth0.5\!!accountwidth}%
  #3\removeunwantedspaces
  \checkACCOUNT
  \presetlocalframed[\????ac]%
  \localframed
    [\????ac]
    [\c!background=\accountparameter\c!background,
    \c!backgroundcolor=\accountparameter\c!backgroundcolor,
    \c!backgroundoffset=\accountparameter\c!backgroundoffset,
    \c!backgroundscreen=\accountparameter\c!backgroundscreen,
    \c!frame=\accountparameter\c!frame,
    \c!framecolor=\accountparameter\c!framecolor,
    \c!offset=\accountparameter\c!offset]
  \bgroup
  \setbox\scratchbox\vbox
  {\offinterlineskip
  \doifelsenothing
    {\accountparameter\c!left%
    \accountparameter\c!middle%
    \accountparameter\c!right}
    {\xdef\MPaccountheaderheight{\the\zeropoint}}
    {\setbox\scratchbox\hbox\!!to\dimexpr2\!!accountwidth+\accountdistance\relax
    {\doif{\accountparameter\c!strut}\v!yes\strut
```

```

\rlap{\accountparameter\c!left}\hfil
\accountparameter\c!middle\hfil
\llap{\accountparameter\c!right}}%
\edef\MPaccountheaderheight{\the\dimexpr\ht\scratchbox+\dp\scratchbox\relax}%
\box\scratchbox}
\doifelse{\accountparameter\c!rule}\v!on
{\doifsomething{\accountparameter\c!framecolor}
{\color[\accountparameter\c!framecolor]}
{\hrule\!!height\accountparameter\c!rulethickness\relax}}
{\vskip\accountparameter\c!rulethickness\relax}%
\hbox{\box\debitbox\betweenaccount\box\creditbox}%
\doifelse{\accountparameter\c!calculate}\v!yes
{\setbox\scratchbox\ vbox
{\doifelse{\accountparameter\c!rule}\v!on
{\doifsomething{\accountparameter\c!framecolor}
{\color[\accountparameter\c!framecolor]}
{\hrule\!!height\accountparameter\c!rulethickness\relax}}
{\vskip\accountparameter\c!rulethickness\relax}}
\hbox
{\hbox\!!to\!!accountwidth
{\doif{\accountparameter\c!strut}\v!yes\strut%
\hfil\debitsum}}%
\spacebetweenaccount
\hbox\!!to\!!accountwidth
{\doif{\accountparameter\c!strut}\v!yes\strut%
\hfil\creditsum}}}%
\edef\MPaccountfooterheight{\the\dimexpr\ht\scratchbox+\dp\scratchbox\relax}%
\box\scratchbox}
{\xdef\MPaccountfooterheight{\the\zeropoint}}}%
\edef\MPaccountmaxheight{\the\dimexpr\ht\scratchbox+\dp\scratchbox\relax}%
\edef\MPaccountmaxwidth {\the\wd\scratchbox}%
\box\scratchbox
\egroup
\egroup}

```

To draw background for the account environment with commands in METAPOST style and the the T_EX style with backslashes you can you se following synonyms in your graphics. The way ti define these commands were taken from `meta-ini.tex`.

```

11 \startMPextensions
    color AccountRuleColor;
\stopMPextensions

12 \startMPinitializations
    AccountRuleColor:=\MPcolor{\accountparameter\c!framecolor};
    %
    AccountMaxWidth:=\MPaccountmaxwidth;
    AccountMaxHeight:=\MPaccountmaxheight;
    %
    AccountTextWidth:=\MPaccounttextwidth;
    AccountNumberWidth:=\MPaccountnumberwidth;
    %
    AccountWidth:=\MPaccountwidth;
    AccountHeight:=\MPaccountheight;

```

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```

%
AccountHeaderHeight:=\MPaccountheaderheight;
AccountFooterHeight:=\MPaccountfooterheight;
%
AccountDebitHeight:=\MPaccountdebitheight;
AccountCreditHeight:=\MPaccountcreditheight;
%
AccountRuleWidth:=\the\dimexpr\accountparameter\c!rulethickness\relax;
\stopMPinitializations

```

```

13 \defineoverlay
    [account]
    [\useMPgraphic{account}]

```

We are not limited to simple rules with \TeX primitives. The following `METAPOST` example graphic shows one way to draw more complicated rules behind the T-Account, you can use thus as an example for your own backgrounds.

```

14 \startuseMPgraphic{account}
    AccountNumberGap=0.5*AccountMaxWidth-AccountWidth;

15     z11 = (0,AccountMaxHeight-AccountHeaderHeight) ;
    z12 = (AccountMaxWidth,AccountMaxHeight-AccountHeaderHeight) ;

16     z21 = (AccountWidth-AccountNumberWidth-AccountNumberGap,AccountMaxHeight-
AccountHeaderHeight-AccountDebitHeight) ;
    z22 = (0.5*AccountMaxWidth,AccountMaxHeight-AccountHeaderHeight-
AccountDebitHeight) ;
    z23 = (AccountMaxWidth-AccountNumberWidth-AccountNumberGap,AccountMaxHeight-
AccountHeaderHeight-AccountCreditHeight) ;
    z24 = (AccountMaxWidth,AccountMaxHeight-AccountHeaderHeight-AccountCreditHeight) ;

17     z31 = (AccountWidth-AccountNumberWidth-AccountNumberGap,AccountFooterHeight) ;
    z32 = (0.5*AccountMaxWidth-AccountNumberGap,AccountFooterHeight) ;
    z33 = (AccountMaxWidth-AccountNumberWidth-AccountNumberGap,AccountFooterHeight) ;
    z34 = (AccountMaxWidth,AccountFooterHeight) ;

18     z41 = (0.5*AccountMaxWidth,AccountMaxHeight-AccountHeaderHeight) ;
    z42 = (0.5*AccountMaxWidth,0) ;
    z43 = whatever [z41,z42]=whatever [z22,z23] ;
    z44 = (0.5*AccountMaxWidth,AccountFooterHeight) ;

19     z51 = (0,AccountFooterHeight) ;
    z52 = (AccountNumberWidth,AccountFooterHeight) ;
    z53 = (0.5*AccountMaxWidth-AccountNumberWidth-AccountNumberGap,AccountMaxHeight-
AccountHeaderHeight-AccountDebitHeight) ;
    z54 = (0.5*AccountMaxWidth-AccountNumberGap,AccountMaxHeight-AccountHeaderHeight-
AccountDebitHeight) ;

20     z61 = (AccountWidth-AccountNumberWidth-AccountNumberGap,0) ;
    z62 = (0.5*AccountMaxWidth-AccountNumberGap,0) ;
    z63 = (AccountMaxWidth-AccountNumberWidth-AccountNumberGap,0) ;
    z64 = (AccountMaxWidth,0) ;

```

```

21 drawoptions (withpen pencircle scaled AccountRuleWidth withcolor AccountRuleColor)
;
linecap := butt ; % no round end of the lines

22 draw z11--z12 ;
draw z33--z34 ;

23 if AccountFooterHeight>Opt:
draw z61--z62 ;
draw z63--z64 ;
fi

24 if AccountCreditHeight>AccountDebitHeight:
draw z31--z32 ;
draw z41--z44 ;
draw z51--z52--z53--z54 ;
else:
draw z21--z22--z23--z24 ;
draw z41--z43 ;
fi

25 setbounds currentpicture to unitsquare xyscaled (AccountMaxWidth,AccountMaxHeight)
;
\stopuseMPgraphic

```

```
\startDEBITS [...,.*,...] ... \stopDEBITS
```

```
* color = IDENTIFIER
```

```
\debit [.1.] {.2.}
OPTIONAL
```

```
1 TEXT
```

```
2 TEXT
```

```

26 \long\def\startDEBITS#1\stopDEBITS
{\bgroup
\def\debit{\dosingleempty\dodebit}%
\def\dodebit[#1]%
{\def\dododebit###1{\dodododebit[#1]{###1}}%
\permitspacesbetweengroups
\dosinglegroupempty\dododebit}%
\def\dodododebit[#1]##2%
{\setbox\scratchbox\hbox{\doifsomething{##2}{\global\advance\!!debitsum##2}}%
\hbox\!!to\hsize{\strut##1\hfill##2}}%
\global\setbox\debitbox\vtop{\hsize\!!accountwidth#1}%
\!!debitheight\ht\debitbox
\advance\!!debitheight\dp\debitbox
\xdef\MPaccountdebitheight{\the\!!debitheight}%
%\xdef\MPaccountdebitwidth {\the\wd\debitbox}%
\egroup}

```

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```
\startCREDITS [...,*...] ... \stopCREDITS

* color = IDENTIFIER
```

```
\credit [.1.] {.2.}
      OPTIONAL
1 TEXT
2 TEXT
```

```
27 \long\def\startCREDITS#1\stopCREDITS
    {\bgroup
     \def\credit{\dosingleempty\docredit}%
     \def\dodocredit[##1]%
       {\def\dododocredit####1{\dododocredit[##1]{#####1}}%
        \permitspacesbetweengroups
        \dosinglegroupempty\dodocredit}%
     \def\dododocredit[##1]##2%
       {\setbox\scratchbox\hbox{\doifsomething{##2}{\global\advance\!!creditsum##2\relax}}%
        \hbox\!!to\hsize{\strut##1\hfill##2}}%
     \global\setbox\creditbox\top{\hsize\!!accountwidth#1}%
     \!!creditheight\ht\creditbox
     \advance\!!creditheight\dp\creditbox
     \xdef\MPaccountcreditheight{\the\!!creditheight}%
     %\xdef\MPaccountcreditwidth {\the\wd\creditbox}%
     \egroup}

28 \long\def\parseACCOUNT#1%
    {\bgroup
     \def\startCREDITS##1\stopCREDITS
       {\def\credit{\dosingleempty\dodocredit}%
        \def\dodocredit[#####1]%
          {\def\dododocredit#####1{\dododocredit[#####1]{#####1}}%
           \permitspacesbetweengroups
           \dosinglegroupempty\dodocredit}%
        \def\dododocredit[#####1]####2%
          {\setbox\scratchbox\hbox{#####1}\!!dimena\wd\scratchbox
           \setbox\scratchbox\hbox{#####2}\!!dimenb\wd\scratchbox
           \compareaccountdimen\!!credittextwidth\!!dimena
           \compareaccountdimen\!!creditnumberwidth\!!dimenb}%
          ##1\removeunwantedspaces}
     \def\startDEBITS##1\stopDEBITS
       {\def\debit{\dosingleempty\dodebit}%
        \def\dodebit[#####1]%
          {\def\dododebit#####1{\dododebit[#####1]{#####1}}%
           \permitspacesbetweengroups
           \dosinglegroupempty\dodebit}%
        \def\dododebit[#####1]####2%
          {\setbox\scratchbox\hbox{#####1}\!!dimena\wd\scratchbox
           \setbox\scratchbox\hbox{#####2}\!!dimenb\wd\scratchbox
           \compareaccountdimen\!!debittextwidth\!!dimena
```

```

        \compareaccountdimen\!!debitnumberwidth\!!dimenb}%
        #1\removeunwantedspaces}
#1\removeunwantedspaces
\compareaccountdimen\!!debittextwidth\!!credittextwidth
\compareaccountdimen\!!debitnumberwidth\!!creditnumberwidth
\global\!!accountwidth\!!debittextwidth
\global\advance\!!accountwidth\!!debitnumberwidth
\global\advance\!!accountwidth\accountparameter\c!columndistance
\xdef\MPaccounttextwidth {\the\!!debittextwidth}%
\xdef\MPaccountnumberwidth{\the\!!debitnumberwidth}%
\xdef\MPaccountwidth      {\the\!!accountwidth}%
\egroup}

29 \def\compareaccountdimen#1#2%
    {\ifdim#2>#1\relax
     #1#2
    \fi}

30 \def\checkACCOUNT
    {\bgroup
     \compareaccountdimen\!!debitheight\!!creditheight
     %\ifdim\!!debitheight>\!!creditheight\relax
     % \global\!!accountheight\!!debitheight
     %\else
     % \global\!!accountheight\!!creditheight
     %\fi
     \xdef\MPaccountheight{\the\!!debitheight}%
    \egroup}

31 \def\linebetweenaccount
    {\bgroup
     \xdef\MPaccountdistance{\the\dimexpr\accountdistance\relax}%
     \ifdim\accountdistance>\zeropoint\relax
       \!!dimena\accountdistance
     \else
       \!!dimena\linewidth
     \fi
     \advance\!!dimena-\linewidth
     \hskip.5\!!dimena
     \doifsomething{\accountparameter\c!framecolor}
       {\color[\accountparameter\c!framecolor]}%
       {\vrule\!!width\accountparameter\c!rulethickness}%
     \hskip.5\!!dimena\relax
    \egroup}

32 \def\spacebetweenaccount
    {\xdef\MPaccountdistance{\zeropoint}%
     \hskip\accountdistance}

```

```

\setupACCOUNT [.1.] [...,2,...]

1  IDENTIFIER

2  frame           = on off none overlay
   background      = screen color none foreground IDENTIFIER
   backgroundscreen = NUMBER
   backgroundcolor  = IDENTIFIER
   backgroundoffset = frame DIMENSION
   rulethickness    = DIMENSION
   framecolor       = IDENTIFIER
   offset           = none overlay default DIMENSION
   width            = fit DIMENSION
   left             = TEXT
   middle           = TEXT
   right            = TEXT
   distance         = DIMENSION

```

\setupAC..

```

33 \def\setupACCOUNT
    {\dodoubleempty\dosetupACCOUNT}

34 \def\dosetupACCOUNT[#1][#2]%
    {\getparameters[\????ac#1][#2]%
     \processaction
     [\getvalue{\????ac#1\c!rule}]
     [ \v!on=>\let\betweenaccount\linebetweenaccount,
       \v!off=>\let\betweenaccount\spacebetweenaccount,
       \s!default=>\let\betweenaccount\spacebetweenaccount,
       \s!unknown=>\let\betweenaccount\spacebetweenaccount]}

35 \def\defineACCOUNT
    {\dodoubleempty\dodefineACCOUNT}

36 \def\dodefineACCOUNT[#1][#2]%
    {\setupACCOUNT
     [#1]
     [\c!background=,
      \c!backgroundoffset=0pt,
      \c!backgroundscreen=,
      \c!backgroundcolor=,
      \c!bodyfont=,
      \c!calculate=\v!no,
      \c!columnndistance=\bodyfontsize,
      \c!distance=\bodyfontsize,
      \c!frame=\v!off,
      \c!framecolor=,
      \c!left=,
      \c!middle=,
      \c!offset=0.25ex,
      \c!right=,
      \c!rule=\v!on,
      \c!rulethickness=\linewidth,
      \c!width=\v!fit,

```

```
        \c!strut=\v!yes,  
        #2]  
    \processbetween{#1}{\ACCOUNT[#1]}}  
37 \def\ACCOUNT[#1]#2%  
    {\startACCOUNT[#1]#2\stopACCOUNT}  
38 \defineACCOUNT[TACCOUNT]  
39 \defineACCOUNT[TKONTO]
```

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Example

A simple example:

```

\startTACCOUNT[left=S,middle=Bilanz,right=H]
\startDEBITS
  \debit [Auto] {2000}
  \debit [Bus] {5000}
\stopDEBITS
\startCREDITS
  \credit [Bank] {1000}
  \credit [Kasse] {200}
  \credit [Kasse] {200}
\stopCREDITS
\stopTACCOUNT

```

This results in the following output:

S	Bilanz		H
Auto	2000	Bank	1000
Bus	5000	Kasse	200
		Kasse	200

40 `\protect \endinput`

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\setupACCOUNT 8
\startACCOUNT 1

\stopACCOUNT 1