

A Color Concept for HiT_EX

Martin Ruckert

Munich University of Applied Sciences
Department of Mathematics and Computer Science



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The Problems of Designing a Programming API

The Design Objectives

The Design

Examples

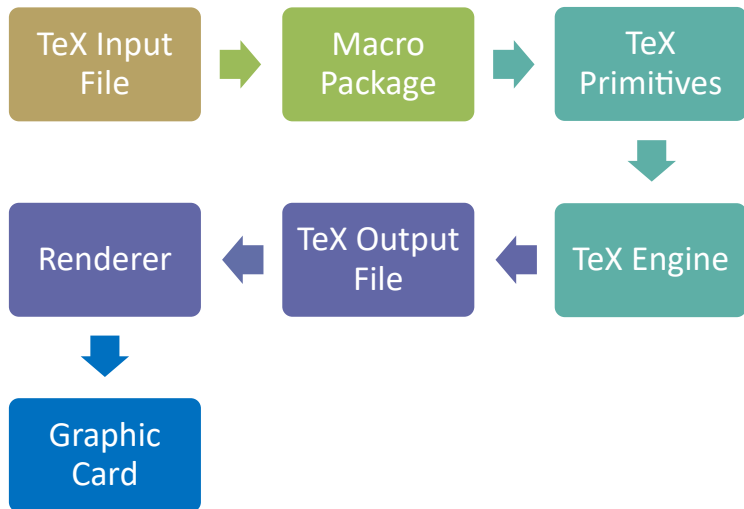
Summary

The Problems of Designing a Programming API

Interfaces: pdf $\text{T}_\text{E}_\text{X}$

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- ▶ Many Separate Designs
- ▶ Proprietary/Standardized File Format
- ▶ Limited Graphic Cards in 1993
- ▶ Limited Design Options for pdf $\text{T}_\text{E}_\text{X}$

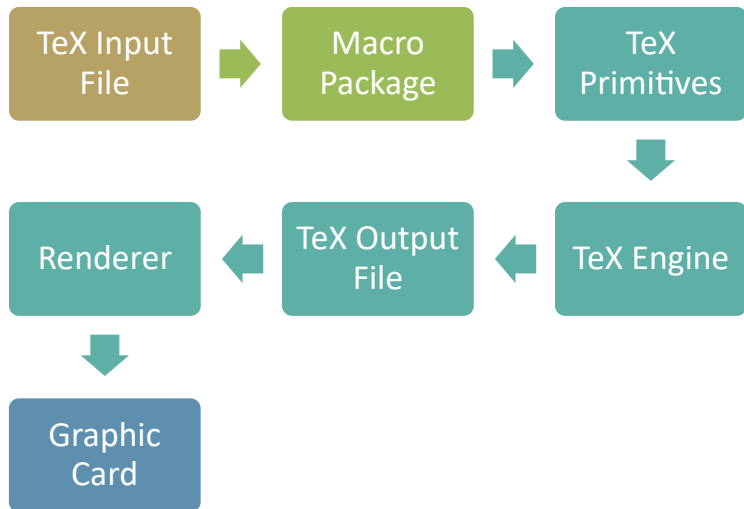


The Problems of Designing a Programming API

Interfaces: HiTeX

Interfaces: HINT

- ▶ Coordinated Interface Designs
- ▶ Powerful Graphic Cards
- ▶ Many Design Options for HiTeX



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- ▶ Compatible with existing designs of T_EX primitives

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Foreground and Background
- ▶ Color Pairs always come as Color Set
Currently: Normal, Highlighted, Focus

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Currently: Normal, Highlighted, Focus
- ▶ Color Specifications contain multiple Color Sets
Currently: Day Mode and Night Mode

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- ▶ Useful Defaults
- ▶ Extensible if needed

External representation used in HiTeX primitives

- ▶ $\langle foreground \rangle$: FG { $\langle integer \rangle$ $\langle integer \rangle$ $\langle integer \rangle$ [$\langle integer \rangle$] }.
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- ▶ $bg\{1\ 1\ 0.3\ 0.5\}$ is a light yellow, transparent background.

External representation used in T_EX primitives

- ▶ $\langle color\ specification \rangle$: $\langle color\ set \rangle$ [dark $\langle color\ set \rangle$].
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- ▶ `\HINTcolor fg{0 0 0} fg{0 0 1} fg{0 0 1} bg{1 1 0 0.5}`
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and gets a transparent yellow background if it is in focus.

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- ▶ The HINT file format allows up to 255 color specifications

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- ▶ An opaque background or foreground in an inner box will hide content in the outer boxes completely.

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- ▶ HiTeX's color stack inserts the current link color after `\HINTstartlink` and restores the color before the link after `\HINTendlink`.

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- ▶ Links are often set apart by using different colors.
- ▶ `\HINTlinkcolor` specifies new colors for the links that follow.
- ▶ The HINT file format specifies (reasonable) defaults for the link colors.
- ▶ The primitive `\HINTdefaultlinkcolor`
 - ▶ will replace the file format defaults.
 - ▶ It must come before the first use of `\HINTcolor` or `\HINTstartlink`.
- ▶ HiTeX's color stack inserts the current link color after `\HINTstartlink` and restores the color before the link after `\HINTendlink`.
- ▶ The author (or package writer) is responsible for keeping `\HINTcolor`, `\HINTendcolor`, `\HINTstartlink`, and `\HINTendlink` primitives properly nested.

```
\def\redTeX{
  \HINTcolor fg{1 0 0}
  \TeX\HINTendcolor}
\def\note{\HINTcolor fg{0.3 0.3 0.3}}
\def\endnote{\HINTendcolor}
```

This is an example showing
the `\redTeX\` logo in red color.

```
\note\ Note how the \redTeX\ logo
is still red inside this note.
\endnote
```

This is an
example showing
the **TEX** logo in
red color.

Note: The
red **TEX** logo
is still red inside
this grey note.

```
\def\red{\HINTcolor fg{1 0 0}}
\def\note{\HINTcolor fg{0.3 0.3 0.3}}
\def\endnote{\HINTendcolor}
\def\home#1{
\HINTstartlink goto name {HINT.home}
#1\HINTendlink}
```

The link `\home{follow the \red Flag}` gets you to the “home” page.

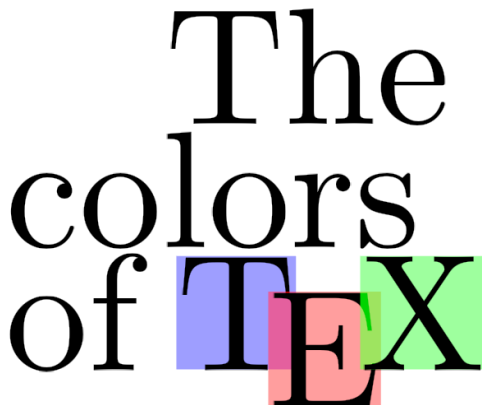
```
\note Note: The link \home{follow the
\red Flag} gets you to the “home” page.
\endnote
```

The link `follow the Flag` gets you to the “home” page.

Note: The link `follow the Flag` gets you to the “home” page.

```
\def\blue{\HINTcolor
  fg {0 0 0} bg{0 0 1 0.4}}
\def\red{\HINTcolor
  fg {0 0 0} bg{1 0 0 0.4}}
\def\green{\HINTcolor
  fg {0 0 0} bg{0 1 0 0.4}}
\def\TeX{%
  \hbox{\blue T}\kern-.1667em
  \lower.5ex\hbox{\red E}%
  \kern-.125em\hbox{\green X}}
```

The colors of \TeX



The colors of TeX

The image shows the text "The colors of TeX" in a serif font. The word "The" is on the top line. "colors" is on the second line. "of" is on the third line. "TeX" is on the fourth line. The letters "T", "E", and "X" in "TeX" are highlighted with semi-transparent colored boxes: "T" is blue, "E" is red, and "X" is green. The boxes overlap the letters and each other.

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Write to `martin.ruckert@hm.edu`

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- ▶ Thank you for your attention.
- ▶ Questions?