

A Search Extension for pgfkeys

Version 1.0

Alceu Frigeri*

December 2023

Abstract

The command `\pgfkeysvalueof`, unlike other `\pgfkeys` commands, doesn't have a `.unknown` handler, or offers the option to search for a key. That's exactly the aim of this, by having a way to find a key in a given path (or collection of paths).

1 Searching for a key

`\pgfkeysearchvalueof` `\pgfkeysearchvalueof {<path-list>} {<key>} {<macro>}`
`\pgfkeysearchvalueofTF` `\pgfkeysearchvalueofTF {<path-list>} {<key>} {<macro>} {<if-found>} {<if-not>}`

`<path-list>` is a comma separated list (clist) of paths (can be a single one). `<key>` is the desired key and `<macro>` is the macro/command that will receive (store) the key value (if one was found). For instance, given a path `/A/B/C/D` it will look first at `/A/B/C/D/<key>`, then `/A/B/C/<key>`, and so on, until `/A/<key>`, Stopping at the first hit, returning the value found in the `<macro>`. The branch version will also execute either `<if-found>` or `<if-not>`.

Note: Those commands aren't expandable, that's the reason to have them storing the key value in a macro and not just 'placing the value in the input stream'.

LaTeX Code:

LaTeX Result:

```
\pgfkeys{/tikz/A/.cd,  
keyA/.initial={A keyA},  
keyB/.initial={A keyB},  
B/.cd,  
keyA/.initial={B keyA},  
keyC/.initial={B keyC},  
C/.cd,  
keyX/.initial={C keyX} }  
\pgfkeysearchvalueof{/tikz/A/B/C}{keyA}{\VALkeyA}  
\pgfkeysearchvalueof{/tikz/A/B/C}{keyB}{\VALkeyB}  
\pgfkeysearchvalueof{/tikz/A/B/C}{keyC}{\VALkeyC}  
\pgfkeysearchvalueof{/tikz/A/B/C}{keyX}{\VALkeyX}  
  
I got for keyA: \textbf{\VALkeyA} \par  
I got for keyB: \textbf{\VALkeyB} \par  
I got for keyC: \textbf{\VALkeyC} \par  
I got for keyX: \textbf{\VALkeyX} \par
```

I got for keyA: **B keyA**
I got for keyB: **A keyB**
I got for keyC: **B keyC**
I got for keyX: **C keyX**

*<https://github.com/alceu-frigeri/pgfkeysearch>