

A Search Extension for pgfkeys

Version 1.1

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

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

`<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'.

L^AT_EX Code:

L^AT_EX Result:

```
\pgfkeys{/tikz/A/.cd,  
keyA/.initial={keyA at /tikz/A},  
keyB/.initial={keyB at /tikz/A},  
B/.cd,  
keyA/.initial={keyA at /tikz/A/B},  
keyC/.initial={keyC at /tikz/A/B},  
C/.cd,  
keyX/.initial={keyX at /tikz/A/B/C} }  
\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: **keyA at /tikz/A/B**
I got for keyB: **keyB at /tikz/A**
I got for keyC: **keyC at /tikz/A/B**
I got for keyX: **keyX at /tikz/A/B/C**

2 Expl3 Base Commands

<code>\pgfkeysearch_multipath_keysearch:nnnTF</code>	<code>\pgfkeysearch_multipath_keysearch:nnnTF {<path-list>} {<key>} {<macro>}</code>
<code>\pgfkeysearch_keysearch:nnnTF</code>	<code>{<if-found>} {<if-not>}</code>
	<code>\pgfkeysearch_keysearch:nnnTF {<single-path>} {<key>} {<macro>} {<if-found>}</code>
	<code>{<if-not>}</code>

These are the *Expl3* version of it (for package writers). In fact, the `\pgfkeysearchvalueof` is just a wrapper to `\pgfkeysearch_multipath_keysearch:nnnTF`. The `\pgfkeysearch_keysearch:nnnTF` is the single path version.

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