The syshex package *

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Abstract

Lightweight LaTeX package that makes available package-level[1] commands to make (hexa-)decimal timestamp, which can be useful to create unique filenames.

Résumé

Extension LaTeX offrant un horodateur (hexa-)decimal, qui peut trouver son utilité pour produire des noms de fichiers uniques. Les commandes afférentes sont de type 'implementation'[1].

Contents

*This file describes version v1.1, last revised 2020/04/27.

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Part I
Usage

`\usepackage` `\usepackage{syshex}`

Requirement

1. `syshex.sty` and its dependencies are in the path of the LaTeX engine. See Part III, section 3.
2. Goes in the *preamble*

`syshex_date:` `\syshex_date:`

Semantics Numeric date

`syshex_date_hex:` `\syshex_date_hex:`

Semantics Numeric date (hex)

`syshex_jobname:` `\syshex_jobname:`

Semantics Combines the job's name and `\syshex_time_hex:`

`syshex_time:` `\syshex_time:`

Semantics Numeric time

`syshex_time_hex:` `\syshex_time_hex:`

Semantics Numeric time (hex)

Part II
Listing

Listing 1. All at once

```
\ExplSyntaxOn
\noindent\syshex_date:\\
\syshex_date_hex:\\
\syshex_time:\\
\syshex_time_hex:\\
\syshex_jobname:
\ExplSyntaxOff
```

20200427
1343beb
2018
7e2
syshex–1343beb–7e2

Part III
Other

1 Acknowledgment

This work has benefited from Q&A's from the LaTeXcommunity[2]

2 Install

1) Compile `syshex.dtx` (under Unix, `$tex syshex.dtx`)

2) Put the generated `syshex.sty` in the search path of the LaTeXengine

3 Support

This package is available from https://www.ctan.org/pkg/syshex and https://github.com/rogard/syshex.

3.1 Platform

i)
```
Linux laptop 4.15.0-20-generic #21-Ubuntu SMP Tue Apr 24
↪  06:16:15 UTC 2018 x86_64 x86_64 x86_64 GNU/Linux
```

3.2 Engine

a)
```
pdfTeX 3.14159265-2.6-1.40.20 (TeX Live 2019)
```

b)
```
pdfTeX 3.14159265-2.6-1.40.21 (TeX Live 2020)
```

c)
```
LuaHBTeX, Version 1.12.0 (TeX Live 2020)
```

d)
```
XeTeX 3.14159265-2.6-0.999992 (TeX Live 2020)
```

3.3 Results

1) syshex v1.2 compiles satisfactorily on platform *i)* and engines *b)*, *c)*, and *d)*

References

[1] https://tex.stackexchange.com/users/112708/erwann?tab=questions

Change History

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The italic numbers denote the pages where the corresponding entry is described, numbers underlined point to the definition, all others indicate the places where it is used.

Part IV
Implementation

1 Opening

```
⟨@@=syshex⟩
\ExplSyntaxOn
```

2 Backend

__syshex_sys_date:

```
\cs_new:Nn \__syshex_sys_date:
{
  \int_eval:n
  {
    \c_sys_year_int * 10000
    +\c_sys_month_int * 100
    +\c_sys_day_int *  1
  }
}
```

(*End definition for* __syshex_sys_date:.)

__syshex_sys_date_hex:

```
\cs_new:Nn \__syshex_sys_date_hex:
{\int_to_hex:n{\__syshex_sys_date:}}
```

(*End definition for* __syshex_sys_date_hex:.)

__syshex_sys_jobname:

```
\cs_new:Nn\__syshex_sys_jobname:
{
  \c_sys_jobname_str--
  \__syshex_sys_date_hex:--
  \__syshex_sys_time_hex:
}
```

(*End definition for* __syshex_sys_jobname:.)

__syshex_sys_time:

```
\cs_new:Nn \__syshex_sys_time:
{
  \int_eval:n
  {
    \c_sys_hour_int * 100
    +\c_sys_minute_int * 1
  }
}
```

(*End definition for* __syshex_sys_time:.)

__syshex_sys_time_hex:

```
\cs_new:Nn\__syshex_sys_time_hex:
{\int_to_hex:n{\__syshex_sys_time:}}
```

(*End definition for* __syshex_sys_time_hex:.)

3 Frontend

```
\cs_new:Nn\syshex_date:{\__syshex_sys_date:}
\cs_new:Nn\syshex_date_hex:{\__syshex_sys_date_hex:}
\cs_new:Nn\syshex_jobname:{\__syshex_sys_jobname:}
\cs_new:Nn\syshex_time:{\__syshex_sys_time:}
\cs_new:Nn\syshex_time_hex:{\__syshex_sys_time_hex:}
```

4 Closing

```
\ExplSyntaxOff
```