luapackageloader package

Deepak Jois
deepak.jois@gmail.com

December 20, 2019

Introduction

LuaTeX modifies the package loading behavior for Lua package, as mentioned in Section 3.2 of the LuaTeX manual:

> LuaTEX is able to use the kpathsea library to find require()d modules. For this purpose, `package.searchers[2]` is replaced by a different loader function, that decides at runtime whether to use kpathsea or the built-in core Lua function. It uses kpathsea when that is already initialized at that point in time, otherwise it reverts to using the normal `package.path` loader.

What this means is that once kpathsea is initialized, the normal package loading behavior is no longer available.

This package allows Lua package loading behavior inside LuaTeX to use *both* kpathsea and the default loading mechanism. If the module is not available in kpathsea, LuaTeX will try to load it from `package.path`. This functionality is very useful, for instance when you need to use LuaRocks modules inside LuaTeX.

1 Installation

Install this package like any other TeX or LaTeX package.

2 Dependencies

This package depends on ifluatex CTAN package.

3 Usage

3.1 Plain TeX

In Plain TeX, you can import the module as follows:

```
\input luapackageloader.sty
```

3.2 LaTeX

In LaTeX, add the `luapackageloader` packages to your document:

```
\usepackage{luapackageloader}
```

3.3 Loading Packages

Once you have imported `luapackageloader`, it adds a table called `luapackageloader` under the global namepace, and automatically overrides the default LuaTeX package searchers. It should be possible to load a Lua package (including [LuaRocks](#) modules, as long as `package.path` and `package.cpath` is setup properly in your environment) as follows:

```
\directlua{
  local serpent = require("serpent") % luarocks install serpent
}
```

3.4 Reverting to default loading behavior

The package loading can be reverted back to the default LuaTeX behavior using the `restore_kpse_searchers()`

```
\directlua{
  luapackageloader.resetore_kpse_searchers()
}
```

3.5 Manually setting up to load Lua packages

This package exposes the function `add_lua_searchers()`, to manually setup the package searchers again, if it was reverted for some reason, after loading the package.

```
\input luapackageloader.sty
\directlua{
  % Lets revert the package searchers to their default loading behavior.
  luapackageloader.restore_kpse_searchers()

 % Some code here...

  % Now lets setup the package searchers to use Lua searchers again.
  luapackageloader.add_lua_searchers()
}
```