MP attributes backends bit32 blobs boolean buffers builders caches callbacks catcodes characters chemistry commands containers context converters coroutine ctxrunner debug dir directives document documentdata environment epdf experiments ffi figures file fio floats font fonts functions global graphics gzip img interactions interfaces in job languages layouts lfs libraries lmx logs lpdf lpeg ltn12 lum luatex lxml math mathematics md5 metapost mime moduledata modules mp mplib noads mode nodes number objects os package pagebuilders parametersets pdf pdfscanner physics publications regimes resolvers sandbox scripts set sio socket sorters statistics storage streams string structures table texconditionals texconfin texconstants texifs texisdefined texmodes texsystemmodes thirddata tokens tracers trackers typesetters unicode url userdata utilities vf visualizers xml zip zlib

# ConT<sub>E</sub>Xt MkIV

## global (alias: \_G)

FFISUPPORTED	function	environment	table
INITEXMODE	boolean	epdf	table
LUATEXCOREVERSION	number	error	function
LUATEXENGINE	string	experiments	table
LUATEXFUNCTIONALITY	number	ffi	table
LUATEXVERSION	number	ffilib	function
MP	table	figures	table
_LUAVERSION	number	file	table
_MAJORVERSION	number	fio	table
_MINORVERSION	number	floats	table
arg	table	font	table
assert	function	fonts	table
attributes	table	frozen	boolean
backends	table	functions	table
bit32	table	getmetatable	function
blobs	table	getpos	function
blockrequire	function	getvpos	function
boolean	table	global	table
buffers	table	<pre>grammar_parsed_text_one_nop</pre>	userdata
builders	table	<pre>grammar_parsed_text_one_yes</pre>	userdata
caches	table	<pre>grammar_parsed_text_two_nop</pre>	userdata
callback	table	<pre>grammar_parsed_text_two_yes</pre>	userdata
callbacks	table	<pre>grammar_unparsed_text_nop</pre>	userdata
catcodes	table	<pre>grammar_unparsed_text_yes</pre>	userdata
characters	table	graphics	table
chemistry	table	gregorian_to_jalali	function
collectgarbage	function	gzip	table
commands	table	img	table
containers	table	inspect	function
context	function	interactions	table
converters	table	interfaces	table
coroutine	table	io	table
ctxrunner	table	ipairs	function
debug	table	jalali_to_gregorian	function
dimen	function	job	table
dir	table	lang	table
directives	table	languages	table
document	table	last	number
documentdata	table	layouts	table
dofile	function	lfs	table
done	boolean	libraries	table

1	<b>+</b> - <b>h</b> 1-		£atian
lmx	table	require	function
load	function	requireswiglib	function
loadfile	function	resolvers	table
loadstring	function	sandbox · .	table
logs	table	scripts	table
lpdf	table	select	function
lpeg	table	set 	table
ltn12	table	setinspector	function
lua	table	setmetatable	function
luatex	table	sio	table
lxml	table	socket	table
math	table	sorters	table
mathematics	table	statistics	table
md5	table	status	table
metapost	table	storage	table
mime	table	streams	table
module	function	string	table
moduledata	table	structures	table
modules	table	swiglib	function
mp	function	table	table
mplib	table	tex	table
next	function	texconditionals	data table
noads	table	texconfig	table
node	table	texconstants	data table
nodes	table	texifs	data table
number	table	texio	table
objects	table	texisdefined	function
optionalrequire	function	texmodes	data table
os	table	texsystemmodes	data table
package	table	thirddata	table
pagebuilders	table	toboolean	function
pairs	function	token	table
parametersets	table	tokens	table
pcall	function	tonumber	function
pdf	table	tostring	function
pdfscanner	table	tracers	table
physics	table	trackers	table
print	function	type	function
publications	table	typesetters	table
rawequal	function	unicode	table
rawget	function	unpack	function
rawlen	function	url	table
rawset	function	userdata	table
regimes	table	utf	table

utilities	table	xml	table
V	number	xpcall	function
vf	table	zip	table
visualizers	table	zlib	table

## attributes (context)

colorintents table	D models
N attribute	F mpcolor
D data	F mpnamedcolor
F enable	F mpoptions
F handler	F namedcolorattributes
F register	N none
D registered	F popset
colors table	F processcolorcomponents
N attribute	F pushset
Fcmyk	F register
F cmyktogray	D registered
F cmyktorgb	F registerspotcolor
F colorcomponents	F rgb
D counts	F rgbtocmyk
B couple	F rgbtogray
F currentmodel	F rgbtohsv
F currentnamedmodel	N selector
D data	F setlist
N default	F setmodel
F defineintermediatecolor	F setpagecolormodel
F definemultitonecolor	D sets
F defineprocesscolor	F spec
F definesimplegray	F spot
F definespotcolor	F spotcolorname
F definetransparency	F spotcolorparent
F enable	F spotcolorvalue
F filter	B supported
F forcedmodel	F toattributes
F forcesupport	F transparencycomponents
F formatcolor	B triggering
F formatgray	F usecolors
F getpagecolormodel	D valid
F gray	F value
F graytohsv	D values
F handler	B weightgray
F hsvtogray	define function
F hsvtorgb	<b>effects</b> table
F iccprofile	N attribute
F isblack	D data
N main	F enable
S model	F handler

F register N hardlight D registered N hue D values N lighten handlers table N luminosity list data table N multiply names data table N none table negatives N normal N attribute N overlav D data N saturation F enable N screen F handler N softlight F register N none D registered F register F set D registered numbers data table B supported ofnode function F toattribute private function B triggering public function F value restore function D values save function unsetvalue number function viewerlavers table showcurrent states table N attribute F disabletriggering F cleanup F enabletriggering D data F finalize F define F initialize F definedlayoutcomponent F process F enable F selective F forcesupport F stacked F handler B hasorder F stacker function system D listwise transparencies table F register N attribute D registered D data F resolve\_begin F resolve\_end F enable F forcesupport F resolve reset F handler F resolve\_step T names D scopes N color F setfeatures N colorburn F start N colordodge F stop N darken B supported N difference D values N exclusion

#### backends (context)

F getfieldcategory

codeinjections table F aetfieldset F boxresourcedimensions F getformatoption F registerboxresource F gethpos F restoreboxresource F getmatrix current strina F getoutputfilename defaults table F getpos T codeiniections F getpreviewfigure F gethpos F getvpos F hasmatrix F getmatrix F insertrenderingwindow F getpos F aetypos F mergebookmarks F hasmatrix F mergereferences T nodeinjections F mergeviewerlayers T registrations F prerollreference D tables F presetsymbol included table F presetsymbollist R context F processrendering B date F registerdocumentcloseaction B id F registerdocumentopenaction B metadata F registeredsymbol B pdf F registerpagecloseaction install function F registerpageopenaction nodeinjections table F registersymbol F setfieldcalculationset F restore F save F setfigurealternative F transform F setfigurecolorspace function nothing F setfiguremask pdf table F setformat T codeiniections F setformsmethod F addbookmarks F setpagetransition F attachmentid F setupcanvas F clonefield F setupidentity F definefield F setxmpfile F definefieldset F startlayer F defineviewerlayer F startunicodetoactualtext F embedfile F startunicodetoactualtextdirect F enabletags F stoplayer F exportformdata F stopunicodetoactualtext F getbookmarks F stopunicodetoactualtextdirect F getdefaultfieldvalue F supportedformats

F unicodetoactualtext

F useviewerlayer F validfield

F validfieldcategory

F validfieldset

S comment

T nodeinjections

F addtags
F annotation
F attachfile

F changestackedlayer

F cmykcolor
F comment
F destination

F destination F effect

F graycolor
F injectbitmap
F insertmovie
F insertsound

F insertswf

F insertu3d F knockout

F negative F overprint F positive F reference
F rgbcolor
F spotcolor
F startlayer

F startstackedlayer

F stoplayer

F stopstackedlayer
F transparency
F typesetfield
T registrations
F cmykindexcolor

F cmykspotcolor

F getspotcolorreference

F grayindexcolor
F grayspotcolor
F rgbindexcolor
F rgbspotcolor
F spotcolorname
F transparency

T tables
D vfspecials

registrations table
tables table
timestamp function

## bit32 (basic lua)

arshift	function	extract	function
band	function	lrotate	function
bnot	function	lshift	function
bor	function	replace	function
btest	function	rrotate	function
bxor	function	rshift	function

## blobs (context)

append	function	strht	function
dimensions	function	strwd	function
dispose	function	tohpack	function
new	function	tonodes	function
pack	function	tovpack	function
strdp	function	write	function
strhd	function		

## boolean (context)

tocontext function
tonumber function

#### buffers (context)

append	function
assign	function
collectcontent	function
erase	function
exists	function
getcontent	function
getlines	function
loadcontent	function
parallel	table

F define

F hassomecontent

F next
F place
F reset
F save

prepend function
raw function
run function
undent function

## builders (context)

kernel	table	T registered
F hyphenat	ion	F reset
F kerning		F set
F ligaturi	ng	F split
F mlist_to	_hlist	F start
T original	.s	F stop
F hyphen	ate	F tag
F kernin	g	<b>profiling</b> table
F ligatu	ring	F add
paragraphs	table	F distance
T construc	ctors	F fixedprofile
N attrib	ute	F get
F define		F list
F disabl	e	F pagehandler
F enable		F profilebox
F handle	r	F set
T method	S	<b>vspacing</b> table
F basio	С	F analyze
F defa	ult	D categories
F hpack	k	F collapsevbox
F onel:	ine	T data
D names		D map
D number	S	D skip
F set		D snapmethods
F start		F definesnapmethod
F stop		B fixed
T expansio	on	F pagehandler
F trace		F resetprevdepth
F keeptoge	ether	F setmap
F register	together	F setskip
T solution	ıs	F snapbox
T splitt	ers	F tocategories
F defi	ne	F tocategory
F optin	nize	F vboxhandler

## caches (context)

ask	boolean	is_writable	function
base	string	loadcontent	function
collapsecontent	function	loaddata	function
configfiles	function	more	string
contentstate	function	relocate	boolean
defaults	table	savecontent	function
define	function	savedata	function
direct	boolean	setfirstwritablefile	function
force	boolean	setluanames	function
${\tt getfirstreadablefile}$	function	tree	string
getreadablepaths	function	treehash	function
getwritablepath	function	usedpaths	function
hashed	function		

#### callback (basic tex)

find function
list function

register overloaded function

#### callbacks (context)

B hyphenate

freeze function B insert local par function known B kerning list data table B ligaturing function gog B linebreak filter function push B mlist to hlist function register B open\_read\_file report function B post\_linebreak\_filter supported table B pre dump B append to vlist filter B pre linebreak filter B build page insert B pre output filter B buildpage filter B process input buffer B call edit B process jobname B contribute filter B process output buffer B define font B process rule B find cidmap file B read cidmap file B find\_data\_file B read\_data\_file B find\_enc\_file B read\_enc\_file B read font file B find font file B find format file B read map file B find\_image\_file B read\_opentype\_file B find\_map\_file B read\_pk\_file B find opentype file B read sfd file B find output file B read truetype file B find\_pk\_file B read\_type1\_file B find read file B read vf file B find\_sfd\_file B show error hook B find\_truetype\_file B show\_error\_message B find\_type1\_file B show\_lua\_error\_hook B find vf file B show warning message B find\_write\_file B start file B finish\_pdffile B start\_page\_number B finish pdfpage B start run B finish synctex callback B stop file B glyph not found B stop page number B glyph\_stream\_provider B stop\_run B hpack\_filter B vpack\_filter B hpack quality B vpack quality

#### catcodes (context)

names data table
numbers data table

register function

#### characters (context)

activeoffset	number	is spacing	data table
adobename	function	lcchars	data table
bidi	data table	lccode	function
blockrange	function	lccodes	data table
blocks	data table	lettered	function
casemap	table	lhash	data table
categories	data table	linebreaks	data table
category	function	lower	function
categorytags	data table	mathlists	data table
classifiers	table	mirrors	table
collapsed	data table	otfscripts	data table
contextname	function	private	table
csletters	data table	ranges	data table
data	data table	registerentities	function
decomposed	data table	remap hangul syllabe	function
description	function	setactivecatcodes	function
descriptions	data table	setlettercatcodes	function
detailtags	data table	shape	function
directions	table	shaped	function
emoji	table	shash	data table
F compact		shchars	data table
F known		shcodes	data table
F resolve		showstring	function
emojized	function	specialchars	data table
enccodes	data table	specials	data table
entities	data table	splits	table
fallbacks	data table	T char	
filters	data table	T compat	
fractions	table	subscripts	table
fromnumber	function	superscripts	table
fschars	data table	synonyms	data table
fscodes	data table	tex	table
getrange	function	D accentmapping	
graphemes	data table	D commandmapping	
hangul	data table	F defineaccents	
initialize	function	F safechar	
is_character	data table	F toutf	
is_command	data table	F toutfpattern	
is_letter	data table	textclasses	table
is_mark 	data table	tonumber	function
is_punctuation	data table	ucchars	data table

uccode
uccodes
uhash
function
data table
data table

unicodechar upper function function

#### chemistry (context)

component	function	
define	function	
definitions	data table	
format	string	
inlinechemical	function	
instance	string	
method	string	

molecule
moleculeparser
start
stop
structures
undefine
function
function
number
function

## containers (context)

cleanname	function	is_valid	function
content	function	read	function
define	function	usecache	boolean
is_usable	function	write	function

#### converters (context)

A	function	cn-c	function
A:es	function	convert	function
A:ru	function	decimals	function
A:sl	function	define	function
AK	function	hexstringtonumber	function
Alphabetic	function	hour	function
Alphabetic:es	function	i	function
Alphabetic:ru	function	_ isleapyear	function
Alphabetic:sl	function	lchexnumber	function
Character	function	lchexnumbers	function
Characters	function	leapyear	function
I	function	lower	function
KA	function	max	function
KR	function	maxchrs	function
R	function	minute	function
RK	function	month	function
Romannumerals	function	nicenumber	function
Russiannumerals	function	nofdays	function
Sloveniannumerals	function	number	function
Spanishnumerals	function	numbers	function
Word	function	octnumber	function
Words	function	octstringtonumber	function
a	function	ordinal	function
a:es	function	r	function
a:ru	function	rawcharacter	function
a:sl	function	romannumerals	function
abjadnodotnumerals	function	russiannumerals	function
abjadnumerals	function	second	function
alphabetic	function	sequences	data table
alphabetic:es	function	settime	function
alphabetic:ru	function	sloveniannumerals	function
alphabetic:sl	function	spaceddigits	function
character	function	spanishnumerals	function
characters	function	textime	function
chineseallnumerals	function	toabjad	function
chinesecapnumerals	function	tochinese	function
chinesenumerals	function	toroman	function
chr	function	totime	function
chrs	function	uchexnumber	function
cn	function	uchexnumbers	function
cn-a	function	upper	function

verbose	table	word	function
D data		words	function
F translate		year	function
weekday	function		

## coroutine (basic lua)

create	function	status	function
resume	function	wrap	function
running	function	yield	function

#### ctxrunner (context)

load function prepfiles data table
preparedfile function resolve function

## debug (basic lua)

debug	function	sethook	function
gethook	function	setlocal	function
getinfo	function	setmetatable	function
getlocal	function	setupvalue	function
getmetatable	function	setuservalue	function
getregistry	function	traceback	function
getupvalue	function	upvalueid	function
getuservalue	function	upvaluejoin	function

## dir (context)

collectpattern	function
current	function
expandname	function
found	function
glob	function
globdirs	function
globfiles	function

globpattern	function
ls	function
makedirs	function
mkdirs	function
pop	function
push	function

## directives (context)

data	data table	name	string
default	function	register	function
disable	function	report	function
done	table	reset	function
enable	function	show	function
list	function	value	function

#### document (context)

arguments files functions getargument getfilename options data table table table function function table D modes
D modules
targument

function setargument setcommandline function setdefaultargument function setenvironments function setfilename function setfilenames function setmodes function setmodules function variables data table

D environments
D modes
D modules

T commandline

D environments

T ctxfile

## environment (context)

_			
argument	function	luafile	function
arguments	data table	luafilechunk	function
basicengines	data table	luatexengine	string
currentrun	number	luatexfuncitonality	number
default_texmfcnf	string	luatexversion	number
definefilefallback	function	maxnofruns	number
definefilesynonym	function	originalarguments	data table
engineflags	data table	outputfilename	string
filename	string	ownbin	string
files	table	ownmain	string
filesynonyms	data table	ownname	string
forcedruns	number	ownpath	string
getargument	function	prerollrun	boolean
homedir	string	rawarguments	data table
initex	boolean	reconstructcommandline	function
initexmode	boolean	relativepath	function
initializearguments	function	setargument	function
initializefilenames	function	splitarguments	function
inputfilebarename	string	suffix	string
inputfilename	string	texfile	function
inputfilesuffix	string	texmfos	string
jobfilefullname	string	texos	string
jobfilename	string	texroot	string
jobfilesuffix	string	truefilename	function
jobname	string	useluamodule	function
kindofrun	number	usemodules	function
loadexamodes	function	validengines	data table
loadluafile	function	version	string

#### epdf (extra tex)

Array function
Attribute function
AttributeOwner\_Type function
Attribute\_Type function
Dict function
Object function

PDFRectangle function
StructElement\_Type function
open overloaded function
openMemStream function
type function

## experiments (context)

data	data table	
default	function	
disable	function	
enable	function	
list	function	
name	string	

register	function
report	function
reset	function
show	function
value	function

#### figures (context)

applvratio badname bases bitmapimage boxnumber number cachepaths check checkers converters current defaultdepth number defaultheight number defaultsearch hool ean defaultwidth number done dummy existers exists formats found get aetinfo getrealpage quess hash identifiers identify function table images

F boxes F check F checksize F clone F copy F immediatewrite F keys

F new F node function function data table function data table function data table data table function function function data table function data table data table function function function function function data table

F ofindex F package F print F scan F serialize F totable F types F write

include includers initialize loaded localpaths magics mergegoodies nofmissing nofprocessed order paths patterns pop preferguality programs push registerpattern registerresource registersuffix resources scale set setlookups setmemstream setorder setpaths suffixes used

function data table function data table data table data table function number number data table data table data table function boolean data table function function function function data table function function function function function function data table

data table

#### file (basic lua)

addsuffix	function	needsupdating	function
basename	function	pathpart	function
checksum	function	readdata	function
collapsepath	function	removesuffix	function
сору	function	replacesuffix	function
dirname	function	reslash	function
expandname	function	robustname	function
extname	function	savechecksum	function
is_qualified_path	function	savedata	function
is_readable	function	size	function
is_rootbased_path	function	splitbase	function
is_writable	function	splitname	function
isreadable	function	splitpath	function
iswritable	function	strip	function
join	function	suffix	function
joinpath	function	suffixes	function
loadchecksum	function	suffixesonly	function
nameonly	function	suffixonly	function
nametotable	function	syncmtimes	function
needs_updating	function		

## fio (extra lua)

ala a alema um d'a a d'a m	E. maki an		£
checkpermission	function	readfixed4	function
getposition	function	readinteger1	function
read2dot14	function	readinteger2	function
readbytes	function	readinteger3	function
readbytetable	function	readinteger4	function
readcardinal1	function	readline	function
readcardinal2	function	recordfilename	function
readcardinal3	function	setposition	function
readcardinal4	function	skipposition	function
readfixed2	function		

## floats (context)

analysemethod	function	nofstacked	function
checkedpagefloat	function	рор	function
collect	function	push	function
consult	function	resave	function
flush	function	save	function
getvariable	function	stacked	function
hasstacked	function		

#### font (basic tex)

${\bf add characters}\\$	function	id	function
current	function	max	function
define	function	nextid	function
each	function	read_tfm	function
fonts	table	read_vf	function
frozen	function	setexpansion	function
getfont	overloaded function	setfont	function

#### fonts (context)

•		
analyzers	table	F currentfonthasfeature
D features		D designsizes
D initializers		D dontembed
D methods		F enhanceparameters
F setstate		T enhancers
D states		T afm
B useunicodemarks		F apply
checkers	table	F patch
F getmissing		T patches
F missing		F register
F placeholder		F report
cid	table	F register
F getmap		F report
F loadfile		T otf
collections	table	F addfeature
F checkenabled		F apply
F clonevector		F enhance
F define		F patch
T definitions		T patches
F found		F register
F prepare		F report
F process		F register
F registermain		F report
F report		T tfm
F reset		F apply
T vectors		F patch
constructors	table	T patches
F addcharacters		F register
F addcoreunicodes		F report
F aftercopyingchara	acters	F register
F applymanipulators	5	F report
F assignmathparamet	ters	N factor
B autocleanup		T features
F beforecopyingcha	racters	D afm
D cache		D otf
B cacheintex		D tfm
F calculatescale		F finalize
F checkedfeatures		F getfeatureaction
F checkedfilename		F getprivate
F cleanuptable		T handlers
F collectprocessors	5	T afm

B autoprefixed	F getalternate
D cache	F getgsub
D features	F getkern
F getkern	F getmultiple
T helpdata	F getsubstitution
D bothkerned	T handlers
D leftkerned	F devanagari_remove_joiners
D ligatures	F devanagari_reorder_matras
D rightkerned	F devanagari_reorder_pre_base_reordering_consonants
D texligatures	F devanagari_reorder_reph
F load	F gpos_context
T readers	F gpos_contextchain
F getinfo	F gpos_cursive
F loadfont	F gpos_mark2base
F loadshapes	F gpos_mark2ligature
F setfeatures	F gpos_mark2mark
B syncspace	F gpos_pair
N version	F gpos_single
T otf	F gsub_alternate
F addfeature	F gsub_context
F basemodeinitializer	F gsub_contextchain
D cache	F gsub_ligature
F collectlookups	F gsub_multiple
T coverup	F gsub_reversecontextchain
T actions	F gsub_single
F alternate	F trigger_space_kerns
F chainposition	T helpers
F chainsubstitution	F blockligatures
F kern	F pardirstate
F ligature	F txtdirstate
F multiple	F load
F pair	F loadoutlinedata
F single	F loadstreamdata
F substitution	F modeinitializer
F register	D pdfcache
S stepkey	F plugininitializer
F dataset	F pluginprocessor
F datasetpositionprocessor	T plugins
S defaultbasealternate	T readers
S defaultnodealternate	F addunicodetable
D features	F avar
F featuresinitializer	F cbdt
F featuresprocessor	F cblc
F getactualtext	F cff

F cff2 F getfactors F cffcheck F getscales F checkhash F gotodatatable F cmap F normalizedaxis F colr T normalizedaxishash F readvariationdata F compact F cpal F reportskippedtable F ebdt F setvariabledata F eblc F hhea F ebsc F hmtx F hvar F expand F kern F extend F fvar F loadfont F gdef F loadshapes F getcomponents F loca F getinfo F math F glyf F maxp F mvar F gpos T gposhandlers F name F chainedcontext F os/2 F context F pack F cursive F parsecharstrings F extension F post F marktobase F registerextender F marktoligature F rehash F marktomark F sbix F stat F pair F single T streamreader F gsub F close T qsubhandlers F getposition F alternate F getsize F chainedcontext F look F context F open F extension F read2dot14 F readbyte F ligature F multiple F readbytes F reversechainedcontextsingle F readbytetable F single F readcardinal F gvar F readcardinal1 F head F readcardinal2 T helpers F readcardinal2le F axistofactors F readcardinal3 F cleanname F readcardinal3le F getaxisscale F readcardinal4

F readcardinal4le	T statistics
F readchar	D usedfeatures
F readfixed2	F storepdfdata
F readfixed4	T svg
F readinteger	F filterglyph
F readinteger1	F topdf
F readinteger2	D svgcache
F readinteger2le	B svgenabled
F readinteger3	T tables
F readinteger3le	D baselines
F readinteger4	D features
F readinteger4le	D featuretypes
F readsignedbyte	D languages
F readstring	D scripts
F readtag	N version
F setposition	T pfb
F size	F loadvector
F skip	T tfm
F skiplong	F addtounicode
F skipposition	D features
F skipshort	N maxnestingdepth
F writebyte	N maxnestingsize
F writecardinal2	F reencode
F writecardinal4	F setfeatures
F writestring	N version
F svg	T vf
N tableversion	T combinations
F unifymissing	F combine
F unpack	T combiner
F vhea	D commands
F vmtx	D helpers
F vorg	D math
F vvar	D predefined
F woff2otf	N version
F registerpalette	D whatever
F registerplugin	F hashfeatures
F reorderlookups	F hashinstance
T sbix	T hashmethods
F topdf	F normal
D sbixcache	F virtual
B sbixenabled	F initializefeatures
F scriptandlanguage	T keys
F setdynamics	T characters
F setfeatures	T descriptions

T parameters	S name	
S ascender	S noglyphnames	
S descender	S nostackmath	
S designsize	S psname	
T expansion	S textitalics	
S auto	S virtualized	
S shrink	D loadedfonts S namemode	
S step		
S stretch	N noffontsloaded	
S extendfactor	N nofsharedfonts	
S factor	N nofsharedhashes	
S hfactor	N nofsharedvectors	
S mathsize	N privateoffset	
T protrusion	D privateslots	
S auto	F readanddefine	
S quad	F registerfeature	
S scaledpoints	F resetfeature	
S scriptpercentage	B resolvevirtualto	0
S scriptscriptpercentage	F scale	
S size	F scaled	
S slantfactor	F setfactor	
S slantperpoint	F setfeature	
T spacing	F setname	
S extra	B sharefonts	
S shrink	F trytosharefont	
S stretch	N version	
S width	current	function
S units	currentid	function
S vfactor	definers	table
S xheight	F addlookup	
T properties	F analyze	
S autoitalicamount	F applypostprocess	ors
S cidinfo	F checkedmode	
S embedding	F checkedscript	
S encodingbytes	F current	
S filename	S defaultlookup	
S finalized	F define	
S fontname	F getspecification	
S format	F internal	
S fullname	F loadfont	
S hasitalics	F makespecification	n
S hasmath	T methods	
S mathitalics	F install	
S mode	D variants	

F read		D colorschemes	
F register		T data	
F registered		T dejavu-math	
F registersplit		S author	
F resetnullfont		S comment	
F resolve		S copyright	
T resolvers		B initialized	
F file		T mathematics	
F name		T alternates	
F spec		T dotless	
definetypeface	function	S comment	
encodings	table	S feature	
T agl		N value	
D ctxcodes		T kerns	
D extras		S name	
D names		S version	
D synonyms		D designsizes	
D unicodes		D filenames	
D cache		F getcompositions	
F is_known		T list	
D known		F load	
F load		F prepare_features	
F make_unicode_vec	tor	F register	
D math		F registerpostproc	essor
D math N version		F registerpostproc F report	essor
	function	- , ,	essor
N version	function data table	F report	table
N version enhanceid		F report T suffixes	
N version enhanceid expansions	data table	F report T suffixes handlers	table
N version enhanceid expansions formats	data table data table	F report T suffixes handlers hashes	table
N version enhanceid expansions formats getalternate	data table data table function	F report T suffixes handlers hashes D characters	table
N version enhanceid expansions formats getalternate getdiscexpansion	data table data table function function function function	F report T suffixes handlers hashes D characters D classes	table
N version enhanceid expansions formats getalternate getdiscexpansion getkern	data table data table function function function	F report T suffixes handlers hashes D characters D classes D csnames	table
N version enhanceid expansions formats getalternate getdiscexpansion getkern getmultiple	data table data table function function function function	F report T suffixes handlers hashes D characters D classes D csnames D descriptions	table
N version enhanceid expansions formats getalternate getdiscexpansion getkern getmultiple getsubstitution	data table data table function function function function function	F report T suffixes handlers hashes D characters D classes D csnames D descriptions D dynamics	table
N version enhanceid expansions formats getalternate getdiscexpansion getkern getmultiple getsubstitution getters	data table data table function function function function function	F report T suffixes handlers hashes D characters D classes D csnames D descriptions D dynamics D emwidths	table
N version enhanceid expansions formats getalternate getdiscexpansion getkern getmultiple getsubstitution getters T alternate	data table data table function function function function function	F report T suffixes handlers hashes D characters D classes D csnames D descriptions D dynamics D emwidths D exheights	table
N version enhanceid expansions formats getalternate getdiscexpansion getkern getmultiple getsubstitution getters T alternate F opentype	data table data table function function function function function	F report T suffixes handlers hashes D characters D classes D csnames D descriptions D dynamics D emwidths D exheights D extensibles	table
N version enhanceid expansions formats getalternate getdiscexpansion getkern getmultiple getsubstitution getters T alternate F opentype T kern	data table data table function function function function function	F report T suffixes handlers hashes D characters D classes D csnames D descriptions D dynamics D emwidths D exheights D extensibles D features D identifiers D italics	table
N version enhanceid expansions formats getalternate getdiscexpansion getkern getmultiple getsubstitution getters  T alternate F opentype T kern F opentype F typel T multiple	data table data table function function function function function	F report T suffixes handlers hashes D characters D classes D csnames D descriptions D dynamics D emwidths D exheights D extensibles D features D identifiers	table
N version enhanceid expansions formats getalternate getdiscexpansion getkern getmultiple getsubstitution getters  T alternate F opentype T kern F opentype F typel T multiple F opentype	data table data table function function function function function	F report T suffixes handlers hashes D characters D classes D csnames D descriptions D dynamics D emwidths D exheights D extensibles D features D identifiers D italics D lastmathids D marks	table
N version enhanceid expansions formats getalternate getdiscexpansion getkern getmultiple getsubstitution getters  T alternate F opentype T kern F opentype F typel T multiple F opentype T substitution	data table data table function function function function function	F report T suffixes handlers hashes D characters D classes D csnames D descriptions D dynamics D emwidths D exheights D extensibles D features D identifiers D italics D lastmathids	table
N version enhanceid expansions formats getalternate getdiscexpansion getkern getmultiple getsubstitution getters  T alternate F opentype T kern F opentype F typel T multiple F opentype	data table data table function function function function function	F report T suffixes handlers hashes D characters D classes D csnames D descriptions D dynamics D emwidths D exheights D extensibles D features D identifiers D italics D lastmathids D marks	table

T processes			D	category_to_place	eholder
D properties				format	
D quads				onetimemessage	
D resources				register	
T setdynamics				reportdefinedfont	:s
T shapes				reportusedfeature	
D spaces		mar		ings	table
D spacings			-	addtounicode	
T streams				fromunicode16	
D unicodes				loadfile	
D variants				loadline	
D xheights				makenameparser	
helpers	table			overloads	
F addextraprivate				reset	
F addprivate				tounicode	
F checkflags				tounicode16	
F checkmerge				tounicode16sequer	ice
F checksteps		met		post	table
F descriptiontoslo	t			boundingbox	
F dimenfactor				boxtomp	
F expandglyph			F	draw	
F fontpatternhassi	ze		F	fill	
F getcoloredglyphs			F	maxbounds	
F getdigitwidth			F	output	
F getinstancespec			F	paths	
F getparameters			F	widthline	
F getprivatecharor	node		F	zeroline	
F getprivatenode		mp			table
F getprivates			D	cache	
F getprivateslot			В	inline	
F hasprivate			N	version	
F indextoslot		nan	ne	s	data table
F name		nul	ιι	data	data table
F nametoslot		pro	ot	rusions	data table
F setdigitwidth		rea	ad	ers	table
F splitfontpattern			F	afm	
F tochar			F	check_lua	
infofont	function		F	check_tfm	
iterators	table		F	lua	
F characters			F	ofm	
F descriptions			F	opentype	
F glyphs			F	otf	
loggers	table		F	pfb	
F add_placeholders			D	sequence	

F	tfm			discexpansion	function
F	ttc		spe	cifiers	table
F	ttf			D contextmerged	
-	woff			F contextnumber	
rese	rveid	function		D contextnumbers	
sele	ct	table		D contextsetups	
D	alternatives			F contexttostring	
F	bodyfont			F definecontext	
D	data			F mergecontext	
F	default			F presetcontext	
D	defaults			F registercontext	
F	definefallbackfam	nily		F showcontext	
F	${\tt define font family}$			F splitcontext	
F	definefontfamilyp	reset		D synonyms	
D	extras			D variants	
F	fallback		sym	bols	table
D	fallbacks			T emoji	
F	features			F checked	
F	filefallback			F resolved	
F	fontdata			F uselibrary	
F	fontfallback		tab	les	table
F	fontsynonym			D data	
F	goodies			F savefont	
F	mathfallback			F saveoriginal	
D	methods		tra	cers	table
D	presets		tre	atments	table
F	${\tt registerfallback}$			F applyfixes	
F	registerfiles			D data	
F	registerfontalter	native		S filename	
F	registerfontfamil	у		F ignoredfile	
F	textfallback			F report	
F	typeface			F trace	
				_	

F typescript F userdata typefaces

table

# functions (context)

**dummy** function

### graphics (context)

#### backgrounds table

F fetchmultipar

F pair

F path

F point

### gzip (extra lua)

close	function	open	function
lines	function	save	function
load	function	suffix	function

### img (basic tex)

boxes	function	ofindex	function
check	function	package	function
checksize	function	print	function
clone	function	scan	function
сору	function	serialize	function
immediatewrite	function	totable	function
keys	function	types	function
new	function	write	function
node	function		

#### interactions (context)

attachments data table D functions fields table D preambles F clone F setpreamble F define F storecode F defineset F storepreamble F insert F usepreamblenow general table F usescripts linkedlists data table F getidentity pages table F setupidentity help table F setpagetransition F collect F setupcanvas table references F reference F register F setclosedocument javascripts table F setclosepage F addtopreamble F setopendocument F code F setopenpage renderings data table D codes soundclips data table F flushpreambles

#### interfaces (context)

addvalidkevs function data table cachedsetups cachesetup function checkedspecification function complete data table data table constants data table corenamespaces currentinterface string currentresponse string definecommand function defined function doifelsemessage function data table elements data table formats getcheckedparameters function getmessage function function getnamespace function getsetupstring hashedsetups data table implement function interfacedcommand function interfaces table invalidkev function function message namespaces table

F define

F list

writestatus

registernamespace function scanners data table function setconstant setcount function setdimen function setelement function setformat function setmacro function setmessage function setmessages function settranslation function data table setupstrings setuserinterface function setvalidkevs function setvariable function showmessage function storedscanners data table strings table data table syntax tolist function translations data table usednamespaces data table variables data table

function

#### io (basic lua)

ask function
bytes function
characters function
close function
copydata function
exists function
fileseparator string
flush function

loadchunk function
loaddata function
loadlines function
noflines function

open overloaded function
output overloaded function

pathseparator string

read function readall function readnumber function readstring function saved lines function savedata function size function stderr userdata stdin userdata stdout userdata function tmpfile function type write function

## job (context)

comment	function	F check	
datasets	table	D collected	
D collected		F count	
F extend		F define	
F getdata		F find	
F setdata		F first	
D tobesaved		F get	
disablesave	function	F getcollected	
embedded	table	F getdata	
D collected		F getfield	
D tobesaved		F gettobesaved	
fileobjreferences	table	F inlist	
D collected		F last	
D tobesaved		F list	
files	table	F save	
D collected		F savetagged	
F context		D tobesaved	
B forcerun		positions	table
F run		F b_column	
D tobesaved		F b_region	
getrandomseed	function	Fc	
initialize	function	D collected	
load	function	F column	
loadother	function	F copy	
objects	table	F depth	
D collected		F e_column	
F get		F e_region	
F number		F enhance	
F page		F extra	
F save		T free	
F set		F get	
D tobesaved		F getreserved	
pack	boolean	F gettobesaved	
packversion	number	F hangafter	
pagestates	table	F hangindent	
D collected		F height	
F extend		F hsize	
F realpage		F leftskip	
F setstate		F lowerleft	
D tobesaved		F lowerright	
passes	table	F markregionbox	

Fn	F xy	
F onsamepage	Fy	
F overlapping	register	function
F p	save	function
T page	structure	table
F paragraph	D collected	
F parindent	T components	
F position	T tobesaved	
Fr	T branches	
F region	S name	
F replace	S type	
F rightskip	variables	table
F set	D checksums	
F setall	D collected	
F setregionbox	F getchecksum	
D tobesaved	F makechecksum	
F upperleft	F restore	
F upperright	F save	
S used	F setchecksum	

D tobesaved

number

version

F whd

F x

F width

### lang (basic tex)

clean	function	id	function
clear_hyphenation	function	new	function
clear_patterns	function	patterns	function
exceptions	function	postexhyphenchar	function
gethjcode	function	posthyphenchar	function
hyphenate	function	preexhyphenchar	function
hyphenation	function	prehyphenchar	function
hyphenationmin	function	sethjcode	function

### languages (context)

associate	function		
		F registerpattern	
associated association	data table function	F setfeatures installed	function
counters	data table	labels	table
current	function		table
data	data table	F define	
decimals	data table	F split <b>loadable</b>	function
define	function	loadwords	function
	function		table
expand flatten	function	logger	table
	table	F report nofflattened	function
frequencies	table	numbers	data table
F averagecharwidth			function
F getdata getdata	function	postexhyphenchar posthyphenchar	function
getnumber	function	preexhyphenchar	function
hjcounts	table	prehyphenchar	function
hyphenate	function	registered	data table
hyphenators	table	replacements	table
T dictionaries	cabic	F add	tabte
D featuresets		F addlist	
F handler		F handler	
T methods		F set	
F expanded		serializediscretionary	function
B none		setexceptions	function
F original		setsynonym	function
F tex		showdiscretionaries	function
F traditional		unload	function
F popmethod		urls	table
F pushmethod		D characters	
F setmethod		N lefthyphenmin	
F setup		D mapping	
F showhyphenationtrace		B packslashes	
T traditional		N righthyphenmin	
F definefeatures		F setcharacters	
F gettrace		version	number
F hyphenate		visualizediscretionaries	function
F injecthyphens		words	table
F installmethod		F check	
F lasttrace		T data	
F loadpatterns		F disable	
F registerexception		F enable	

T enablers
B enables
F found

F load T methods N threshold

#### layouts (context)

status table
 F isleftpage

F leftorrightpageaction

### lfs (extra lua)

attributes	overloaded	function
chdir	overloaded	function
currentdir	function	
dir	overloaded	function
isdir	overloaded	$ \hbox{function} $
isfile	overloaded	function
lock	function	
lock_dir	overloaded	function
mkdir	overloaded	function

mkdirs readlink rmdir setmode shortname symlinkattributes touch	function overloaded overloaded overloaded overloaded overloaded	function function function function
unlock	function	runction

#### libraries (context)

extratex data table
functions data table
globals data table

#### lmx (context)

color	function
convert	function
convertfile	function
convertstring	function
einject	function
eprint	function
escape	function
finalized	function
finject	function
fprint	function
get	function
getvariables	function
htmfile	function
html	table
Fa	
F td	
F th	
include	function

- inherited table
  S color-background-four
  - S color-background-one
  - S color-background-three
  - S color-background-two
  - S title

initialize	function
inject	function
lmxfile	function

loadedfile	function
make	function
new	function
overloaderror	function
popupfile	function
print	function
pv	function
report	function
reset	function
result	function
set	function
show	function
showdebuginfo	function
showerror	function
stripcss	function
tv	function
type	function
urlescape	function
variable	function
variables	table

- S color-background-blue
- S color-background-body
- S color-background-green
- S color-background-main
- S color-background-purple
- S color-background-yellow
- S title-default

### logs (context)

application	function	setformats	function
categories	function	setformatters	function
direct	function	setlogfile	function
disable	function	setmessenger	function
enable	function	setprocessor	function
exporters	table	setprogram	function
extendbanner	function	settarget	function
finalactions	function	settimedlog	function
flush	function	settranslations	function
help	function	show	function
loggingerrors	function	show_close	function
messenger	function	show_load	function
new	function	show_open	function
newline	function	simple	function
poptarget	function	simpleline	function
pushtarget	function	simplelines	function
registerfinalactions	function	start_page_number	function
report	function	starterrorlogging	function
reportbanner	function	startfilelogging	function
reporter	function	status	function
reporters	table	stop_page_number	function
F banner		stoperrorlogging	function
F export		stopfilelogging	function
F help		subdirect	function
F info		subreport	function
F lines		system	function
F version		texerrormessage	function
reportline	function	writer	function
reportlines	function		

## lpdf (context)

action	function	finalizedocument	function
adddocumentcolorspace	function	finalizepage	function
adddocumentextgstate	function	finishtransparencycode	function
adddocumentpattern	function	flushobject	function
adddocumentshade	function	flushstreamfileobject	function
addtocatalog	function	flushstreamobject	function
addtoinfo	function	formats	data table
addtonames	function	frompdfdoc	function
addtopageattributes	function	fromsixteen	function
addtopageresources	function	gethpos	function
addtopagesattributes	function	getmatrix	function
addxmpinfo	function	getpos	function
annotationspecification	function	getvpos	function
array	function	graycode	function
boolean	function	hasmatrix	function
border	function	id	function
checkedkey	function	injectxmpinfo	function
checkedvalue	function	insertxmpinfo	function
circularshade	function	layerreference	function
cmykcode	function	limited	function
collectedresources	function	linearshade	function
color	function	nametree	function
colorspace	function	null	function
colorspaceconstants	data table	number	function
colorspec	function	pagereference	function
colorvalue	function	patternstream	function
colorvalues	function	pdfcolor	function
constant	function	pdftimestamp	function
delayedobject	function	permitdetail	function
destinationspecification	function	protectresources	boolean
dictionary	function	rectangle	function
docstring	function	reference .	function
epdf	table	registerannotation	function
F contenttotext		registerdestination	function
F expand		registerdocumentfinalizer	function
F expanded		registerpagefinalizer	function
F getpagecontent		registerpattern	function
F getstructure		reserveobject	function
F load		rgbcode	function
F unload •		rotationcm	function
escaped	function	setdates	function

settime	function	tosixteen	function
settrailerid	function	transform	function
shareobject	function	transparency	function
shareobjectreference	function	transparencycode	function
spotcode	function	transparencygroups	table
stream	function	B none	
string	function	transparencyvalue	function
timestamp	function	unicode	function
toeight	function	verbose	function
topdfdoc	function		

### lpeg (basic lua)

В	function	firstofsplit	function
C	function	frontstripper	function
Carg	function	instringchecker	function
Cb	function	is_lpeg	function
Cc	function	keeper	function
Cf	function	locale	function
Cg	function	match	function
Cmt	function	oneof	function
Ср	function	patterns	data table
Cs	function	pcode	function
Ct	function	print	function
P	function	ptree	function
R	function	replacer	function
S	function	secondofsplit	function
UP	function	setmaxstack	function
UR	function	setutfcasers	function
US	function	split	function
V	function	splitat	function
afterprefix	function	splitter	function
anywhere	function	stripper	function
append	function	times	function
balancer	function	tsplitat	function
beforesuffix	function	tsplitter	function
checkedsplit	function	type	function
counter	function	utfchartabletopattern	function
endstripper	function	version	function
finder	function		

#### ltn12 (extra lua)

BLOCKSIZE	number	F simp	lify
filter	table	F tabl	e
F chain		source	table
F cycle		F cat	
pump	table	F chai	n
F all		F empt	у
F step		F erro	r
sink	table	F file	
F chain		F rewi	nd
F error		F simp	lify
F file		F stri	ng
F null			

#### lua (basic tex)

bytecode	table	mask	string
bytedata	data table	messages	data table
bytedone	table	name	table
B page-cst		newtable	function
collectgarbage	function	numbers	data table
delay	function	registercode	function
finalize	function	registeredcodes	function
firstbytecode	number	registerfinalizer	function
flush	function	registername	function
flushdelayed	function	setbytecode	function
<pre>get_functions_table</pre>	function	setluaname	function
getbytecode	function	startupfile	string
getluaname	function	version	string
lastbytecode	number		

#### luatex (context)

F collect

F disable

cleanuptempfiles function F enable currentfile function F finish registerdumpactions function F pause registerpageactions function F registerdisabler registerstartactions function F registerenabler registerstopactions function F resetfilename registertempfile function F resume starttime number F setfilename synctex table F setup F blockfilename F start

F stop

F wrapup

### lxml (context)

all function flushlinewise function applyfunction function flushsetups function applyselectors function flushspacewise function att function get_id function getid function badinclusions function getindex function checkindex function id flushspacewise function checkindex function id function include function command function include function include function command function inclusions function concat function inclusions function concat function inclusions function context function intluserbatim function context function installsetup function convert function last function convert function last function direct function lastatt function directives table loadbuffer function function function function function firster fload function firster function function load function firster function path function doifelse function function pos function doifelsetext function function pure function doifent function function pure function doifnotext function pushmatch function function function function function raw function element function rawtex function elements function register function entities data table register function entities data table register function entities data table register function function function function function registerentity function entities function registerentity function	- 442 - 4	for attack	£1	£
applyfunction function flushsetups function applyselectors function flushspacewise function att function get_id function get_id function getid function getid function getindex function getindex function chainattribute function id function id function id function chainattribute function id function comeand function include function command function inclusion function concat function inclusions function concat function inclusions function concat function inclusions function context function installsetup function convert function last function last function direct function last function direct function lastatt function direct function lastatt function function function function function function function function function load function load function path function doifelse function path function doifelse function pos function doifent function pure function doifent function function pure function doifent function pure function function function function pushmatch function pushmatch function rawroot function element function rawroot function element function register function entities data table register function entities data table register function function registerentity function entities function registerentity function function registerentity	addindex	function	flush	function
applyselectors function flushspacewise function att function get_id function getid function badinclusions function getindex function chainattribute function id function idsplitter userdata collected function include function command function include function concat function inclusions function concat function inclusions function concat function inclusions function content function inclusions function content function inclusions function context function installsetup function convert function last function delete function lastatt function delete function load function directives table loadbuffer function fractives table loadbuffer function from function from function from function from function load function displayverbatim function namespace function doifelseempty function path function doifelseext function posmatch function doifelsext function posmatch function doifenty function pure function doifnot function pure function doifnotext function pure function doifnotext function pure function doifnotext function pure function doifnotext function raw function raw function refatt function element function register function registerentity function entities data table register function registerentity				
att function getid function badinclusions function getindex function chainattribute function getindex function checkindex function id function checkindex function id function collected function include function command function inclusion function concat function inclusion function concat function inclusions function concat function inclusions function content function inlineverbatim function content function installsetup function convert function last function delete function lastatt function direct function lastatt function direct function load function fafter fafter loaddata function function function function function function function load function direct function load function direct function load function path function doifelse function posmatch function doifelseempty function posmatch function doifent function posmatch function doifnot function pure function doifnot function pure function function function pure function doifnotext function raw function raw function element function rawex function elements function register function entities data table register function function registerentity function registerentity function			•	
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resolvedentity	function
root	function
save	function
serialize	function
setaction	function
setcdata	function
setcommandtonone	function
setcommandtotext	function
setsetup	function
snippet	function
sorters	table

F add
F compare
F flush
F reset
F show
F sort

splitid function startraw function startunescaped function function stopraw function stopunescaped function store strip function stripped function function tag function text tobuffer function tofile function toparameters function toverbatim function verbatim function withindex function xmltexhandler data table

#### math (basic lua)

abs	function	log	function
acos	function	max	function
asin	function	min	function
atan	function	mod	function
atan2	function	modf	function
ceil	function	odd	function
ceiling	function	pi	number
cos	function	pow	function
cosd	function	rad	function
cosh	function	random	overloaded function
deg	function	randomseed	function
div	function	round	function
even	function	setrandomseedi	function
exp	function	sin	function
floor	function	sind	function
fmod	function	sinh	function
frexp	function	sqrt	function
huge	number	tan	function
initialseed	number	tand	function
ldexp	function	tanh	function

#### mathematics (context)

addfallbacks	function	mapremap	data table
alphabets	data table	overloaddimensions	function
alternatives	data table	overloadparameters	function
big	function	privatebase	number
boldmap	data table	registerdomain	function
categories	table	registerfallbackid	function
D functions	cabec	remapalphabets	function
charactersets	data table	renderings	table
checkaccentbaseheight	function	D mappings	200 20
checkprivateparameters	function	D numbers	
classes	data table	D sets	
codes	data table	renderset	function
define	function	resetattributes	function
dimensions	function	resetitalics	function
domains	table	resolvefallbacks	function
extensiblecode	function	scaleparameters	function
extensibles	data table	setdomain	function
extrabase	number	setitalics	function
extras	table	setridofprime	function
F add		sets	data table
F copy		styles	data table
fallbacks	table	syncboth	function
F apply		syncname	function
F install		syncstyle	function
fallbackstyleattr	function	toname	function
families	data table	tostyle	function
finishfallbacks	function	tweakaftercopyingfont	function
gaps	data table	tweakbeforecopyingfont	function
getboth	function	tweaks	table
getdomain	function	utfmathaccent	function
getitalics	function	utfmathclass	function
getridofprime	function	utfmathcommand	function
getstyle	function	utfmathfiller	function
horizontalcode	function	utfmathstretch	function
initializeparameters	function	virtualize	function
makefont	function	virtualized	data table

#### md5 (extra lua)

HEX	function
crypt	function
dec	function
decrypt	function
exor	function

hex function
sum function
sumHEXA overloaded function
sumhexa overloaded function

# metapost (context)

checkformat function gettext function checkformat function graphic separate function colorinitializer function initializescriptrunner function comment function instance function convert function instance function convert function intermediate table defaultformat string function load function directrun function load function escaped function makempy table extensiondata data table function makempy table function flushers table metafun table  T pdf F comment F flushfigure F startfigure f startfigure f function flushers table parse fonts function flushers table parse function flushers function nytomat function flushers function nytomat function flushers function pluginations function flushers f function properties for function flushiteral function nytomat function flushiteral function properties for financial function flushrese function pupinate for financial function properties function flusher f flushfigure for function properties function flushere f function flushrese function process function flushrese function process function proversible function flushrese function process function flushrese function pupinateles function function function function function function process function format function pushvariable function format_number function pushvariable function format_number function reducetogray boolean getjobata function reporterror function getjobata	11	£		£
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F textfigure  flushliteral function flushnormalpath function flushreset fonts  F define T flusher F tlushfigure F startfigure F stopfigure N nofconverted  N nofconverted  N number number function pdfliteral parse function pdfliterals function pluginactions pluginactions function popvariable function F startfigure popvariables function N instances process function process function processplugins function format function properties process function pushvariable function format_string function pushvariables function formatnumber function quickanddirty function getclippath function reducetogray poolean getextensions	F startfigure		mptopdf	table
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flushnormalpath flushresetfunctionnvformat optimizefunctionfontstableparse pdfliteralsfunctionF definepluginactions pluginactionsfunctionT flusherpluginactions popvariablefunctionF startfigurepopvariables processfunctionF stopfigureprocess processpluginsfunctionN instancesprocessplugins processpluginsfunctionF processprocessspecial formatfunctionformatfunctionpushvariable pushvariablefunctionformat_stringfunctionpushvariables quickanddirtyfunctionformatnumberfunctionquickanddirtyfunctiongetclippathfunctionreducetograybooleangetextensionsfunctionreporterrorfunction	F textfigure		N nofconverted	
flushresetfunctionoptimizebooleanfontstableparsefunctionF definepdfliteralsfunctionT flusherpluginactionsfunctionF flushfigurepopvariablefunctionF startfigurepopvariablesfunctionF stopfigureprocessfunctionN instancesprocesspluginsfunctionF processprocessspecialfunctionformatfunctionpropertiestableformat_numberfunctionpushvariablefunctionformat_stringfunctionpushvariablesfunctionformatnumberfunctionquickanddirtyfunctiongetclippathfunctionreducetograybooleangetextensionsfunctionreporterrorfunction	flushliteral	function	n	number
fonts table parse function F define pdfliterals function T flusher pluginactions function F flushfigure popvariable function F startfigure popvariables function F stopfigure process function N instances processplugins function F process processpecial function format function properties table format_number function pushvariable function format string function pushvariables function formatnumber function quickanddirty function getclippath function reducetogray boolean getextensions	flushnormalpath	function	nvformat	function
F define T flusher F flushfigure F startfigure F stopfigure N instances F process F pr	flushreset	function	optimize	boolean
T flusher  F flushfigure  F startfigure  F stopfigure  N instances  F process  F unction  F process  F process  F process  F unction  F process  F process  F unction  F process  F unction  F process  F unction  F process  F process  F unction  F unction  F process  F unction  F unction	fonts	table	parse	function
F flushfigure popvariable function F startfigure popvariables function F stopfigure process function N instances processplugins function F process processplugins function format function properties table format_number function pushvariable function format_string function pushvariables function formatnumber function quickanddirty function getclippath function reducetogray boolean getextensions function reporterror function	F define		pdfliterals	function
F startfigure popvariables function F stopfigure process function N instances processplugins function F process processplugins function format function properties table format_number function pushvariable function format_string function pushvariables function formatnumber function quickanddirty function getclippath function reducetogray boolean getextensions function reporterror function	T flusher		pluginactions	function
F stopfigure N instances P process P	F flushfigure		popvariable	function
N instances F process Process Process Process Process Process Processspecial Function Format Format Format_number Format_string Function Format_string Function Formatnumber Function Formatnumber Function Functi	F startfigure		popvariables	function
F process  format  function  format function  format_number  format_string  formatnumber  formatnumber  formatnumber  formatnumber  formatnumber  function  formatnumber  function  quickanddirty  function  getclippath  function  reducetogray  boolean  getextensions  function  reporterror  function	F stopfigure		process	function
format function properties table format_number function pushvariable function format_string function pushvariables function formatnumber function quickanddirty function getclippath function reducetogray boolean getextensions function reporterror function	N instances		processplugins	function
format_numberfunctionpushvariablefunctionformat_stringfunctionpushvariablesfunctionformatnumberfunctionquickanddirtyfunctiongetclippathfunctionreducetograybooleangetextensionsfunctionreporterrorfunction	F process		processspecial	function
format_stringfunctionpushvariablesfunctionformatnumberfunctionquickanddirtyfunctiongetclippathfunctionreducetograybooleangetextensionsfunctionreporterrorfunction	format	function	properties	table
formatnumber function quickanddirty function getclippath function reducetogray boolean getextensions function reporterror function	format_number	function	pushvariable	function
getclippathfunctionreducetograybooleangetextensionsfunctionreporterrorfunction	format_string	function	pushvariables	function
getextensions function reporterror function	formatnumber	function	quickanddirty	function
	getclippath	function	reducetogray	boolean
getjobdata function reset function	getextensions	function	reporterror	function
	getjobdata	function	reset	function

resetlastlog	function	F get	
resetplugins	function	F reset	
runscript	function	F set	
scripterror	function	F setfrombuffer	
setextensions	function	texerrors	boolean
setoutercolor	function	texexp	function
settext	function	textextsdata	function
setvariable	function	theclippath	function
showlog	boolean	totable	function
simple	function	unload	function
svformat	function	untagvariable	function
tex	table	variables	table

#### mime (extra lua)

b64 decode decodet	function function table	qp qpwrp stuff	function function function
F base64		unb64	function
F quoted-	printable	unqp	function
dot	function	wrap	function
encode	function	wrapt	table
encodet	table	F base64	
F base64		F defaul	t
F quoted-	printable	F quoted	printable
eol	function	F text	
normalize	function	wrp	function

# mp (context)

BackSpace	function	OuterMarginWidth	function
BaseLineSkip	function	OverlayDepth	function
BodyFontSize	function	OverlayHeight	function
BottomDistance	function	<b>OverlayLineWidth</b>	function
BottomHeight	function	OverlayOffset	function
BottomSpace	function	<b>OverlayWidth</b>	function
CurrentColumn	function	PageDepth	function
CurrentHeight	function	PageFraction	function
CurrentWidth	function	PageNumber	function
CutSpace	function	PageOffset	function
EmWidth	function	PaperBleed	function
ExHeight	function	PaperHeight	function
FooterDistance	function	PaperWidth	function
FooterHeight	function	PrintPaperHeight	function
HSize	function	PrintPaperWidth	function
HeaderDistance	function	RealPageNumber	function
HeaderHeight	function	RightEdgeDistance	function
InPageBody	function	RightEdgeWidth	function
InnerEdgeDistance	function	RightMarginDistance	function
InnerEdgeWidth	function	RightMarginWidth	function
InnerMarginDistance	function	SpineWidth	function
InnerMarginWidth	function	StrutDepth	function
LastPageNumber	function	StrutHeight	function
LayoutColumnDistance	function	TextHeight	function
LayoutColumnWidth	function	TextWidth	function
LayoutColumns	function	TopDistance	function
LeftEdgeDistance	function	TopHeight	function
LeftEdgeWidth	function	TopSkip	function
LeftMarginDistance	function	TopSpace	function
LeftMarginWidth	function	VSize	function
LineHeight	function	_f_	function
MakeupHeight	function	_get_count_	function
MakeupWidth	function	_get_dimen_	function
<b>NOfColumns</b>	function	_get_toks_	function
NOfPages	function	_set_count_	function
NamedColor	function	_set_dimen_	function
OnOddPage	function	_set_toks_	function
OnRightPage	function	boolean	function
OuterEdgeDistance	function	dataset	function
OuterEdgeWidth	function	datasets	table
OuterMarginDistance	function	F load	

defaultcolormodel	function	positionbox	function
dimension	function	positioncurve	function
disposehash	function	positionpage	function
format	function	positionpath	function
formatted	function	positionpxy	function
fprint	function	positionregion	function
get	table	positionwhd	function
F boolean		positionxy	function
F number		prefix	function
F numeric		print	function
F string		quadruple	function
get_outline_text	function	quoted	function
getcount	function	report	function
getdimen	function	setcount	function
gettoks	function	setdimen	function
graphformat	function	settoks	function
inhash	function	size	function
integer	function	systemmode	function
isarray	function	tb_dimensions	function
mode	function	texstr	function
n	function	texvar	function
newhash	function	tohash	function
numeric	function	triplet	function
pair	function	tt_dimensions	function
path	function	tt_initialize	function

function

positionanchor

#### mplib (extra tex)

fields function
finder function
finders table

F file

get\_boolean function
get number function

get\_numeric function
get\_string function

**new** overloaded function

pen\_info function
preprocessed function
version function

#### noads (context)

handlers	table	F render	
F align		F resize	
F alternates		F showtree	
F autofences		F tags	
F classes		F unscript	
F collapse		F variants	
F domains		process	function
F families		processnested	function
F fixscripts		processors	table
F italics		F mlist_to_hli	st
F kernpairs		T unscript	
F makeup		processouter	function
F relocate			

#### node (basic tex)

F getid

F getkern

check discretionaries function F getlang check discretionary function F getleader copy function F getlist copy list function F getnext function count F getnucleus function current attr F getoffsets dimensions function F getpenalty direct table F getprev F check discretionaries F getproperty F check discretionary F getshift F copy F aetsub F copy list F getsubtype F getsup F count F current attr F getwhd F dimensions F getwidth F effective glue F has attribute F end\_of\_math F has\_field F find attribute F has glyph F hpack F first glyph F flatten discretionaries F insert after F flush list F insert before F flush node F is char F flush properties table F is direct F is\_glyph F free F get attribute F is node F get\_properties\_table F is zero glue F get\_synctex\_fields F kerning F getattributelist F last node F aetboth F lenath F getbox F ligaturing F getchar F new F getcomponents F protect glyph F getdepth F protect glyphs F getdir F protrusion skippable F getdisc F rangedimensions F getfield F remove F getfont F set attribute F getglue F set\_properties\_mode F getheight F set\_synctex\_fields

F setattributelist

F setboth

F	setbox		end_of_math	function
F	setchar		family_font	function
F	setcomponents		fields	function
F	setdepth		find_attribute	function
F	setdir		first_glyph	function
F	setdisc		fix_node_lists	function
F	setfield		flatten_discretionaries	function
F	setfont		flush_list	function
F	setglue		flush_node	function
F	setheight		flush_properties_table	function
F	setkern		free	function
F	setlang		get_attribute	function
F	setleader		get_properties_table	function
F	setlink		getboth	function
F	setlist		getchar	function
F	setnext		getdisc	function
F	setnucleus		getfield	function
F	setoffsets		getfont	function
F	setpenalty		getglue	function
F	setprev		getid	function
F	setproperty		getleader	function
F	setshift		getlist	function
F	setsplit		getnext	function
F	setsub		getprev	function
F	setsubtype		getproperty	function
F	setsup		getsubtype	function
F	setwhd		getwhd	function
F	setwidth		has_attribute	function
F	slide		has_field	function
F	tail		has_glyph	function
F	todirect		hpack	function
	tonode		id	function
F	tostring		insert_after	function
	traverse		insert_before	function
	traverse_char		is_char	function
F	traverse_id		is_glyph	function
	unprotect_glyph		is_node	function
	unprotect_glyphs		is_zero_glue	function
	unset_attribute		kerning	function
	usedlist		last_node	function
	uses_font		length	function
	vpack		ligaturing	function
	write		mlist_to_hlist	function
effe	ctive_glue	function	new	function

next	function	tail	function
prev	function	tostring	function
protect_glyph	function	traverse	function
protect_glyphs	function	traverse_char	function
protrusion_skippable	function	traverse_id	function
rangedimensions	function	type	function
remove	function	types	function
set_attribute	function	unprotect_glyph	function
set_properties_mode	function	unprotect_glyphs	function
setfield	function	unset_attribute	function
setglue	function	usedlist	function
setproperty	function	uses_font	function
setwhd	function	vpack	function
slide	function	whatsits	function
subtype	function	write	function
subtypes	function		

#### nodes (context)

accentcodes	data table	fencecodes	data table
aligned	function	fields	function
append	function	fillcodes	data table
apply	function	find_attribute	function
applyvisuals	function	first_glyph	function
astable	function	firstcharacter	function
basepoints	function	firstcharinbox	function
boundarycodes	data table	firstdirinbox	function
boxes	table	firstglyph	function
F dimensions		flush	function
F direct		flush_list	function
F found		flush_node	function
F reset		free	function
F restore		fullhpack	function
F save		getattr	function
builders	table	getattribute	function
F buildpage_filter		getbox	function
F vpack_filter		getchar	function
<pre>check_discretionaries</pre>	function	getdisc	function
codes	data table	getfield	function
concat	function	getfont	function
сору	function	getglue	function
copy_list	function	getid	function
copy_node	function	getleader	function
count	function	getlist	function
countall	function	getnext	function
current_attr	function	getprev	function
delete	function	getsubtype	function
destinations	table	getwhd	function
N attribute		gluecodes	data table
T done		glyphcodes	data table
F handler		glyphdir_is_equal	data table
T stack	J-4- 4-61-	glyphdir_is_opposite	data table
dimensionfields dimensions	data table	glyphdir_is_orthogonal	data table
	function data table	handlers	table
dir_is_pop	data table data table	F accessibility	
<pre>dir_negation disccodes</pre>	data table data table	F alignbackgrounds	
discretionarycodes	data table	F backgrounds F characters	
effective_glue	function	F characters F checkforleaks	
end of math	function		
ena_01_matri	TUILCETOIL	F checkglyphs	

F cleanupbox		is node	function
F cleanuppage		is_nut	function
F export		is rotated	data table
F finalize		is_zero_glue	function
F flatten		ischar	function
F flattenline		isglyph	function
F migrate		kerncodes	data table
F protectglyphs		kerning	function
F stripping		kevs	table
F textbackgrounds		T whatsit	
F unprotectglyphs		last_node	function
has attribute	function	_ leadercodes	data table
has_field	function	leftmarginwidth	function
has_glyph	function	length	function
hpack	function	ligaturing	function
idstostring	function	linefillers	table
ignorablefields	data table	D data	
injections	table	F define	
F copy		F enable	
F getligaindex		F handler	
F getthreshold		lines	table
F handler		T boxed	
F installgetspaceboth		F register	
F installnewkern		F setup	
F isspace		F stage_one	
F keepcounts		F stage_two	
F reset		D data	
F resetcounts		F finalize	
F setcursive		F number	
F setkern		N scratchbox	
F setligaindex		link	function
F setmark		linked	function
F setmove		list	function
F setposition		listablefields	data table
F setspacekerns		listcodes	data table
insert_after	function	listtoutf	function
insert_before	function	load	function
insert_list_after	function	locate	function
installattributehandler	function	margincodes	data table
is_char	function	marginkerncodes	data table
is_direct	function	markers	table
is_display_math	function	F get	
is_glyph	function	mathcodes	data table
is_mirrored	data table	maxboxwidth	function

mlist to hlist function F free new function F fullhpack noadcodes data table F get\_components table noadoptions F get synctex fields N axis F getattr N exact F getattribute N left F getattributelist N middle F getattrlist N no axis F getboth N right F getbox N set F getboxglue N unused 1 F getchar N unused 2 F getcomponents nodecodes data table F getdepth nopts function F getdir table nuts F getdisc F append F getdiscretionary F apply F getfield F applyvisuals F getfont F check discretionaries F getglue F concat F getheight F copy F getid F copy\_list F getkern F getlang F copy\_no\_components F copy node F getlanguage F copy\_only\_glyphs F getleader F copy\_properties F getlist F copyvisual F getnext F getnucleus F count F count\_components F getoffsets F countall F getpenalty F current\_attr F getprev F delete F getprop F dimensions F getshift F effective\_glue F getsub F end of math F getsubtype F find\_attribute F getsup F first\_glyph F getsurround F firstcharacter F getwhd F firstcharinbox F getwidth F firstqlyph F has\_attribute F flush F has\_field F flush list F has glyph

F flush node

F hpack

F insert after F leader F insert\_before F leftmarginkern F insert\_list\_after F leftskip F is char F lineskip F is direct F mathchar F is display math F mathtextchar F is\_glyph F negatedglue F is node F noad F pdfannotation F is\_nut F is\_zero\_glue F pdfdestination Fischar F pdfdirectliteral F pdfliteral F isglyph F kerning F pdforiginliteral F last node F pdfpageliteral F pdfrawliteral F leftmarginwidth F length F pdfrestore F ligaturing F pdfsave F link F pdfsetmatrix F linked F penalty F radical F locate F mlist to hlist F register F nestedtracedslide F rightmarginkern F new F rightskip T pool F rule F accent F shrink F baselineskip F special F boundary F stretch F choice F subbox F cleanup F submlist F delim F temp F delimiter F textdir F disc F usage F emptyrule F userattributes F fence T userids F fontkern N margins.inline F fraction N property F glue N splitters.one N splitters.two F gluespec F glyph F userlist F hlist F userlua F italickern F usernumber F kern F userrule F latelua F userstring

F lateluafunction

F usertokens

F vlist F setnucleus F wordboundary F setoffsets F prepend F setpenalty F protect glyph F setprev F protect glyphs F setprop F setshift F protrusion skippable F rangedimensions F setsplit F setsub F rawprop F reference F setsubtype F rehpack F setsup F remove F setsurround F setunsetattributes F repackhlist F replace F setvisual F rightmarginwidth F setvisuals F setwhd T rules F userrule F setwidth F set\_attribute F slide F set components F somepenalty F set synctex fields F somespace F setattr F splitbox F setattribute F tail F setattributelist F take components F setattributes F takeattr F setattrlist F takebox F setboth F takelist F setbox F theprop F setboxglue F tonode F setchar F tonodes F setcomponents F tonut F setdepth F tosequence F setdir F tostring F setdisc F tracedslide F setdiscretionary F traverse F setfield F traverse char F setfont F traverse\_id F setglue T typesetters F setheight F tohbox F setkern F tohpack F setlang F tonodes F setlanguage F tovbox F setleader F tovpack F setlink F unprotect\_glyph F setlist F unprotect glyphs

F unset\_attribute

F setnext

F unsetattribute		F rule	
F unsetattributes		F special	
F untracedslide		F usage	
F use_components		F usernumber	
F usedlist		F vlist	
F uses_font		prepend	function
F vianodes		print	function
F vianuts		processors	table
F vpack		F contribute_filter	
F write		B enabled	
packlist	function	F hpack_filter	
oardir_is_equal	data table	F post_linebreak_filter	
oardir_is_opposite	data table	F pre_linebreak_filter	
oardir_is_parallel	data table	F tracer	
oartextdir_is_equal	data table	processranges	function
oenaltycodes	data table	processwords	function
olugindata	table	properties	table
F finalizer		T actions	
F initializer		F delayed	
S name		F fdelayed	
T namespace		F immediate	
N attribute		F attach	
D data		T data	
F enable		F delayed	
F handler		protect_glyph	function
F register		protect_glyphs	function
D registered		protrusion_skippable	function
D values		pts	function
F processor		radicalcodes	data table
ooints	function	rangedimensions	function
oool	table	reference	function
F baselineskip		references	table
F cleanup		N attribute	
F glyph		T done	
F hlist		F handler	
F kern		T stack	
F latelua		rehpack	function
F lineskip		remove	function
F pdfdirectliteral		repackhlist	function
F pdforiginliteral		replace	function
F pdfrestore		report	function
F pdfsave		rightmarginwidth	function
F pdfsetmatrix		rulecodes	data table
F register		rules	table
-			

D data		F resetsamples	
F define		F takesample	
F enable		somepenalty	function
F handler		somespace	function
T ruleactions		splitbox	function
F box		stripdiscretionaries	function
F draw		stripping	table
F fill		T glyphs	
F mp		F set	
F stroke		striprange	function
F userrule		tail	function
save	function	takeattr	function
serialize	function	takebox	function
serializebox	function	tasks	table
set_attribute	function	F actions	
setattr	function	F appendaction	
setattribute	function	F disableaction	
setattributes	function	F disablegroup	
setboth	function	F enableaction	
setbox	function	F enablegroup	
setboxtonaturalwd	function	F freeze	
setfield	function	F freezegroup	
setglue	function	F new	
setlink	function	F prependaction	
setlist	function	F removeaction	
setnext	function	F replaceaction	
setprev	function	F restart	
setunsetattributes	function	F setaction	
setwhd	function	F showactions	
shifts	table	F table	
D data		textdir_is_equal	data table
F define		textdir_is_is	data table
F enable		textdir_is_opposite	data table
F handler		textdir_is_parallel	data table
show	function	tobasepoints	function
showboxes	function	tocentimeters	function
showcodes	function	tociceros	function
showlist	function	todidots	function
showsimplelist	function	todimen	function
skipcodes	data table	toinches	function
slide	function	tomillimeters	function
snapshots	table	tonewciceros	function
F getparameters		tonewdidots	function
F getsamples		tonode	function

tonodes	function	F	
tonut	function	F reset F start	
topicas	function		
	function	F stop	
topoints		F stop	
toscaledpoints	function	T transparencies	
tosequence	function	F reset	
tostring	function	F set	
totable	function	F setlist	
totree	function	traverse	function
toutf	function	traverse_char	function
tracers	table	traverse_id	function
T characters		typesetters	table
F collect		F hbox	
F equal		F hpack	
F start		F tohbox	
F string		F tohpack	
F unicodes		F tonodes	
T colors		F tovbox	
F reset		F tovpack	
F set		F vpack	
F setlist		unprotect_glyph	function
F fontchar		unprotect_glyphs	function
T frequencies		unset_attribute	function
F register		unsetattribute	function
T pool		unsetattributes	function
T nodes		usedlist	function
F rule		usercodes	data table
T nuts		vianodes	function
F rule		vianuts	function
F resetproperties		visualizebox	function
F rule		visualizers	table
F setlist		F attribute	
F setproperties		T attributes	
F start		F box	
T steppers		F handler	
F check		F markfonts	
F codes		F setfont	
F features		F setlayer	
F font		F setruledglyph	
F glyphs		F setvisual	
F message		vpack	function
F messages		whatcodes	data table
F nofsteps		whatsitcodes	data table
F register		write	function

#### number (context)

	function	tobasepoints	function
basepoints	function	tobitstring	function
bit	function	tocentimeters	function
bits	function	tociceros	function
bytetodecimal	function	tocontext	function
clearbit	function	todidots	function
compactfloat	function	todimen	function
decimaltobyte	function	toevenhex	function
dimenfactors	data table	toinches	function
formatted	function	tomillimeters	function
formattedfloat	function	tonewciceros	function
hasbit	function	tonewdidots	function
maxdimen	number	tonumberf	function
nopts	function	tonumberg	function
percent	function	topicas	function
points	function	topoints	function
pts	function	toscaled	function
setbit	function	toscaledpoints	function
signed	function	toset	function
sparseexponent	function	valid	function
splitdimen	function		

# objects (context)

data	table	page	function
dimensions	function	reference	function
found	function	register	function
n	number	restore	function

#### os (basic lua)

platform string

getenv	function	remove	overloaded function
setenv	function	rename	overloaded function
binsuffix	string	resolvers	table
binsuffixes	table	F bits	
clock	function	resultof	function
converttime	function	runtime	function
date	function	selfdir	string
difftime	function	setenv	overloaded function
env	data table	setlocale	overloaded function
exec	overloaded function	sleep	function
execute	overloaded function	spawn	overloaded function
exit	function	time	function
fulltime	function	times	function
getenv	overloaded function	timezone	function
gettimeofday	function	tmpdir	function
isleapyear	function	tmpname	function
launch	function	today	function
libsuffix	string	type	string
localtime	function	uname	function
name	string	uuid	function
newline	string	validdate	function
nofdays	function	weekday	function
now	function	where	function
pipeto	function	which	function

# package (basic lua)

config	string
cpath	string
extralibpath	function
extralibpaths	function
extraluapath	function
extraluapaths	function
helpers	table
libpaths	function
loaded	table
loaders	table
loadlib	function

luapaths	function
path	string
poplibpath	function
popluapath	function
preload	table
pushlibpath	function
pushluapath	function
searchers	table
searchpath	function
seeall	function

# pagebuilders (context)

F setarea

columnsets table	F sethsize
F add	F sethspan
F block	F setlines
F check	F setproperties
F currentcolumn	F setstart
F define	F setvsize
F finishflush	<pre>injections table</pre>
F flushareas	F flushafter
F flushcolumn	F flushbefore
F flushrest	F save
F goto	<b>mixedcolumns</b> table
F noto	F cleanup
F prepareflush	F finalize
F put	F getlist
F registerarea	F getrest
F reset	F getsplit

F setsplit

# pdf (basic tex)

fontname	function	immediateobj	function
fontobjnum	function	mapfile	function
fontsize	function	mapline	function
getcatalog	function	maxobjnum	function
getcompresslevel	function	newcolorstack	function
getcreationdate	function	obi	function
getdecimaldigits	function	objtype	function
getdestmargin	function	pageref	function
getgentounicode	function	print	function
gethpos	function	refobj	function
getignoreunknownimages	function	registerannot	overloaded function
getimageresolution	function	reserveobj	function
getimageresocution	function	setcatalog	overloaded function
getinfo	function	setcompresslevel	function
getlastannot	function	setdecimaldigits	function
getlastlink	function	setdestmargin	function
getlastobj	function	setfontattributes	function
getlinkmargin	function	setgentounicode	function
getmajorversion	function	setignoreunknownimages	function
getmatrix	function	setimageresolution	function
getminorversion	function	setinclusionerrorlevel	function
getnames	function	setinfo	overloaded function
getobjcompresslevel	function	setlinkmargin	function
getomitcidset	function	setmajorversion	function
getorigin	function	setminorversion	function
getpageattributes	function	setnames	overloaded function
getpageresources	function	setobjcompresslevel	function
getpagesattributes	function	setomitcidset	function
getpkresolution	function	setorigin	function
getpos	function	setpageattributes	overloaded function
getretval	function	setpageresources	overloaded function
getsuppressoptionalinfo	function	setpagesattributes	overloaded function
getthreadmargin	function	setpkresolution	function
gettrailer	function	setsuppressoptionalinfo	function
gettrailerid	function	setthreadmargin	function
getversion	function	settrailer	overloaded function
getvpos	function	settrailerid	function
getxformattributes	function	setxformattributes	function
getxformmargin	function	setxformmargin	function
getxformresources	function	setxformresources	function
hasmatrix	function	xformname	function

# pdfscanner (context)

scan function

# physics (context)

units table

F registerunit

D tables

#### publications (context)

addtexentry	function	S author
analyze	function	T categories
anywhere	function	T article
authorcache	data table	S category
authorcollapsers	data table	T extra
authorhashers	table	T fields
F invertedshort		S author
F normal		S editor
F normalinverted		S journal
F normalshort		S keywords
F short		S note
authormap	data table	S number
authortoregister	function	S pages
casters	table	S title
F author		S volume
F keyword		S year
F pagenumber		T optional
F range		T required
checkeddataset	function	T sets
citevariants	table	T author
F author		T virtual
F authornum		T book
F authoryear		S category
F authoryears		T extra
F category		T fields
F default		S address
F entry		S author
F index		S edition
F keywords		S editor
F num		S keywords
F page		S note
F short		S number
F tag		S publishe
F textnum		S subtitle
F year		S title
collected	data table	S volume
components	table	S year
F author		T optional
concatstate	function	T required
converttoxml	function	T sets
currentspecification	table	T author

T editionset	S version	
T virtual	D virtual	
T demo-a	T virtualfields	
S category	B authornum	
T extra	B authoryear	
T fields	B authoryears	
S author	B num	
S institution	B suffix	
S organization	datasets	table
S subtitle	detailed	table
S title	endnotes_to_btx	function
S year	enhancer	table
T optional	S arguments	
T required	T askip	
T sets	B dirty	
T author	T gskip	
T virtual	T kind	
T demo-b	T list	
S category	T system	
T extra	T order	
T fields	enhancers	table
S author	F details	
S institution	F order	
S organization	F suffixes	
S subtitle	finder	function
S title	firstofrange	function
S year	found	function
T optional	get	function
T required	getcasted	function
T sets	getdetail	function
T authors	getdirect	function
T virtual	getfaster	function
S comment	getfield	function
S copyright	getfuzzy	function
T fields	getindex	function
S name	inspectors	data table
T types	journals	table
S author	F abbreviated	
S editor	F add	
S keywords	F expanded	
S number	F load	
S page	F save	
S pages	lastofrange	function
S volume	lists	table

F collectentries		loadreplacementfile	function
F combiinlist		new	function
F fetchentries		okay	function
F filterall		oneorrange	function
F flushcombi		parenttag	function
F flushentry		permitted	function
T methods		refman_to_btx	function
F dataset		resolvedname	function
F force		save	function
F global		search	function
F local		setcategory	function
F nofregistered		setspecification	function
F prepareentries		singularorplural	function
F register		sortedentries	function
F sameasprevious		sortmethods	table
T sorters		T authoryear	
F cite		T sequence	
F dataset		specifications	table
F default		T default	
F index		S author	
F list		S comment	
F reference		S copyright	
F short		S name	
F used		S version	
F uservariable		D virtual	
listvariants	table	splitauthor	function
F default		splitoneauthor	function
F index		statistics	table
F num		N nofbytes	
F short		N nofdatasets	
F tag		N nofdefinitions	
load	function	N nofshortcuts	
loadbibdata	function	tables	table
loaddefinitionfile	function	D implicits	
loaders	table	D origins	
F bbl		D privates	
F bib		D sets	
F buffer		D specials	
F endnote		D types	
F json		D virtuals	
F lua		tags	function
F refman		tracers	table
F registercleaner		F showdatasetauthors	
F xml		F showdatasetcompletene	SS

F showdatasetfields F showentry F showfields

F showhashedauthors F showtables F showvariants

F author F keyword typesetters table F pagenumber F author F range

function function table

F string usedataset

usedentries

writers

# regimes (context)

cleanup	function	process	function
disable	function	push	function
enable	function	toregime	function
fromregime	function	translate	function
pop	function		

#### resolvers (context)

-11	£	et de de de	£
allprefixes	function	findpath	function
appendhash 	function	findtexfile	function
automount	function	findwildcardfile	function
automounted	table	findwildcardfiles	function
booleanvariable	function	formatofsuffix	function
cacheversion	string	formatofvariable -	function
checkedvariable	function	formats	data table
cleanedpathlist	function	foundintree	function
cleanpath	function	foundintrees	function
cleanpathlist	function	generators	data table
concatinators	data table	get_from_content	function
configbanner	string	getenv	function
configurationfiles	function	getextrapaths	function
criticalvars	data table	getfilehashes	function
dangerous	data table	gethashes	function
datastate	function	getownpath	function
defaultsuffixes	table	getreadfilename	function
dowithfilesandreport	function	hashers	data table
dowithfilesintree	function	homedir	string
dowithpath	function	initialized	function
dowithvariable	function	inputstack	table
env	function	installinputfilehandler	function
executers	table	installinputlinehandler	function
expandbraces	function	jobpath	function
expandedpathfromlist	function	jobs	table
expandedpathlist	function	F currentcomponent	
expandedpathlistfromvariable	function	F currentenvironment	
expandpath	function	F currentproduct	
expandpathfromvariable	function	F currentproject	
expansion	function	F justacomponent	
extendtexmfvariable	function	D processors	
filtered_from_content	function	F productcomponent	
find_file	<del>function</del>	F usefile	
find_files	<del>function</del>	joinpath	function
findbinfile	function	knownvariables	function
findctxfile	function	load	function
finders	data table	loadbinfile	function
findfile	function	loaders	data table
findfiles	function	loadlualib	function
findgivenfile	function	loadtexfile	function
findgivenfiles	function	loadtime	function

locateformat function data table savers data table locators scandata function luacnffallback strina scanfiles function luacnfname table string schemes luacnfspec string T cleaners luacnfstate string F md5 table macros F none F convertfile F strip F decodecomment F cleanname F enablecomment F fetchstring F fetchtable F encodecomment F install F preprocessed setdvnamic function F processmk setenv function F processmkvi F version setmemstream function maxreadlevel number showpath function methodhandler function simplescanfiles function openbinfile function splitconfigurationpath function openers data table splitexpansions function openfile function splitmethod function opentexfile function splitpath function ownpath strina stackpath function starttiming function popextrapath function function stoptiming function poppath data table suffixes data table prefixes prependhash function suffixmap data table suffixofformat pushextrapath function function pushpath function texdatablob function registerextrapath function toppath function registerfile function unexpandedpath function registerfilehash function unexpandedpathlist function registerintrees function unresolve function registermethod function updaterelations function registerzipfile function updatescript function relations data table uselibrary function function data table usertypes renew renewcache function usezipfile function repath function validatedpath function function variable function reset variableofformat resetextrapaths function function variableofformatorsuffix resetmemstream function function resetresolve function wildcardpattern function

function

resolve

#### sandbox (context)

disablelibraries	function	possiblepath	function
disablerunners	function	redefine	function
enable	function	register	function
filehandlerone	function	registerbinary	function
filehandlertwo	function	registerlibrary	function
finalizer	function	registerroot	function
getrunner	function	registerrunner	function
initializer	function	report	function
iohandler	function	setfilenamelogger	function
logcalls	function	setlogger	function
logfiles	function	setreporter	function
original	function	settrace	function
overload	function	validfilename	function

#### scripts (context)

#### autofontfeature table

F disable

F enable

F handler

N inter\_char\_half\_shrink\_factor

N inter\_char\_half\_stretch\_factor

N inter\_char\_hangul\_penalty

N inter\_char\_quarter\_shrink\_factor

N inter\_char\_quarter\_stretch\_factor

N inter\_char\_shrink\_factor

N inter\_char\_stretch\_factor

N inter\_word\_stretch\_factor

handlers data table table hash iniectors data table installdataset function installmethod function numbertocategory data table numbertodataset data table numbertohandler data table reset function function set data table splitters

### set (context)

contains function
create function
tolist function

tonumber function
totable function

## sio (context)

read2dot14	function	readfixed2	function
readbytes	function	readfixed4	function
readbytetable	function	readinteger1	function
readcardinal1	function	readinteger2	function
readcardinal2	function	readinteger3	function
readcardinal3	function	readinteger4	function
readcardinal4	function		

#### socket (extra lua)

**BLOCKSIZE** number S connection boolean DEBUG S content-description SETSIZE number S content-disposition bind function S content-encoding function choose S content-id function connect S content-language connect4 function S content-length function connect6 S content-location dns table S content-md5 F getaddrinfo S content-range F gethostname S content-transfer-encoding F getnameinfo S content-type F tohostname S date F toip S diagnostic-code ftp table S dsn-gateway S PASSWORD S etag N PORT S expect N TIMEOUT S expires S USER S final-log-id F command S final-recipient F get S from F open S host F put S if-match gettime function S if-modified-since headers table S if-none-match T canonic S if-range S accept S if-unmodified-since S accept-charset S in-reply-to S accept-encoding S keywords S accept-language S last-attempt-date S accept-ranges S last-modified S action S location S max-forwards S age S allow S message-id S alternate-recipient S mime-version S arrival-date S original-envelope-id S authorization S original-recipient S bcc S pragma S cache-control S proxy-authenticate S cc S proxy-authorization S comments S range

S received	protect	function
S received-from-mta	select	function
S references	sink	function
S referer	sinkt	table
S remote-mta	F close-	when-done
S reply-to	F defaul	t
S reporting-mta	F http-c	hunked
S resent-bcc	F keep-o	pen
S resent-cc	skip	function
S resent-date	sleep	function
S resent-from	smtp	table
S resent-message-id	S DOMAIN	
S resent-reply-to	N PORT	
S resent-sender	S SERVER	
S resent-to	N TIMEOU	Т
S retry-after	S ZONE	
S return-path	F messag	e
S sender	F open	
S server	F send	
S smtp-remote-recipient	source	function
S status	sourcet	table
S subject	F by-len	gth
S te	F defaul	t
S to	F http-c	hunked
S trailer	F until-	
S transfer-encoding	tcp	function
S upgrade	tcp6	function
S user-agent	tp	table
S vary	N TIMEOU	Т
S via	F connec	
S warning	try	function
S will-retry-until	udp	function
S www-authenticate	udp6	function
S x-mailer	url	table
http table	F absolu	te
N PORT	F build	
N TIMEOUT	F build_	path
S USERAGENT	F escape	
F open	F parse	
Frequest	F parse_	
newtry function	F unesca	ре

#### sorters (context)

basicsorter function table comparers F basic

table constants

S defaultdigits S defaultlanguage S defaultmethod N digitsmaximum N digitsoffset N ignoredoffset

T validmethods

N replacementoffset

B ch B mc B mm Врс B pm B uc B zc

B zm

definitions data table firstofsplit function packch function packuc function function setlanguage function sort splitters table

Futf

function strip data table tracers update function

### statistics (context)

checkfmtstatus	function	resettiming	function
elapsed	function	runtime	function
elapsedindeed	function	savefmtstatus	function
elapsedseconds	function	show	function
elapsedtime	function	starttiming	function
enable	boolean	stoptiming	function
formatruntime	function	threshold	number
hastiming	function	timed	function
memused	function	tracefunction	function
register	function		

### status (basic tex)

list function setexitcode function

resetmessages function

# storage (context)

allocate	function
data	table
mark	function
marked	function
max	number
min	number
nofmodules	number

noftables	number	
register	function	
shared	data table	
storedfunctions	data table	
strip	boolean	
tofmodules	number	
toftables	number	

## streams (context)

collect	function	push	function
disable	function	start	function
enable	function	stop	function
flush	function	synchronize	function
initialize	function		

# string (basic lua)

autodouble	function	nspaces	table
autosingle	function	optionalquoted	function
booleanstring	function	quote	function
byte	function	quoted	function
bytepairs	function	rep	function
bytes	function	replacenewlines	function
bytetable	function	reverse	function
char	function	split	function
characterpairs	function	splitlines	function
characters	function	splitup	function
checkedsplit	function	strip	function
collapsespaces	function	sub	function
count	function	tformat	function
dump	function	toHEX	function
escapedpattern	function	toboolean	function
explode	function	tobytes	function
find	function	tocontext	function
format	function	todec	function
formatter	function	todimen	function
formatters	function	tohex	function
fullstrip	function	tonodes	function
gmatch	function	topattern	function
gsub	function	totable	function
is_boolean	function	toutf	function
is_empty	function	tracedchar	function
itself	function	tracedchars	table
len	function	unquote	function
limit	function	unquoted	function
longtostring	function	upper	function
lower	function	utfcharacters	function
match	function	utfvalues	function
nospaces	function	valid	function

### structures (context)

atlocation	function	F previous	
blocks	table	F raw	
D collected		F record	
F define		F reset	
F print		F restart	
F save		F restore	
F select		F save	
F setstate		F set	
D states		F setlevel	
D tobesaved		F setoffset	
bookmarks	table	F setown	
T extras		F setstate	
F get		F setvalue	
F mergesections		T specials	
F register		F userpage	
F reset		F subs	
F tosections		D tobesaved	
F finalize		F value	
F flatten		F way	
F installhandler		currentsectionnumber	function
F merge		descriptions	table
S method		documents	table
F overload		D data	
F place		F initialize	
F register		F preset	
F setup		F reset	
counters	table	floats	table
F add		formulas	table
F analyze		helpers	table
F check		F analyze	
D collected		F formulanumber	
F compact		F merged	
F converted		F page	
F currentvalue		F pageofinternal	
D data		F prefix	
F define		F prefixlastpage	
F first		F prefixpage	
F get		F simplify	
F last		F title	
F next		F touserdata	
F prev		inserts	table

D data		F savedlistnumber
F define		F savedlistprefixednumber
F getdata		F savedlisttitle
F getlocation		D sectionblocks
F getname		F sectionnumber
F getnumber		F size
F setlocation		F title
F setup		D tobesaved
D stored		F userdata
itemgroups	table	F uservalue
lists	table	marks table
F addto		D data
F analyze		F define
B autoreorder		F exists
D cached		F fetch
D collected		F fetchallmarks
F discard		F fetched
F enhance		F fetchonemark
T enhancers		F fetchtwomarks
F filter		F get
F formulanumber		F number
F getresult		F relate
F groupindex		F reset
F hasnumberdata		F set
F haspagedata		F show
F hastitledata		F synchronize
F iscached		F title
D kinds		T tracers
F label		F showtable
F location		<b>notes</b> table
D names		F check_spacing
F number		F checkpagechange
D ordered		F define
F page		F doifonsamepageasprevious
F popnesting		F get
F prefix		F getdeltapage
F prefixednumber		F getinternal
F prefixedpage		F getn
F process		F getstate
D pushed		F hascontent
F pushnesting		F internal
F realpage		F internalid
F reordered		F listindex
T result		T numbers

	F ordered		F filterdefault
	F postpone		D filters
	F resetpostponed		D flaginternals
	F restore		F from
	F save		D functions
	F setstate		F get
	D states		F getcurrentmetadata
	F store		F getcurrentprefixspec
рā	ages	table	F getinnermethod
	F analyze		F getinternalcachedlistreference
	D collected		F getinternallistreference
	F in_body		F getinternalreference
	F is_odd		F getoutermethod
	N nofpages		D handlers
	F number		F identify
	F on_right		F import
	F save		F inject
	D tobesaved		F injectcurrentset
re	eferences	table	S innermethod
	F analyze		D internals
	F checkedfile		F load
	F checkedfileorurl		F loadpresets
	F checkedprogram		F mark
	F checkedrealpage		S outermethod
	F checkedurl		D pages
	D collected		U prefixsplitter
	U componentsplitter		D productdata
	F currentmetadata		T programs
	F currentorder		T data
	D currentset		F define
	F define		F get
	D defined		F realpageofpage
	D derived		U referencesplitter
	F enableinteraction		D referred
	F enhance		F referredpage
	D executers		F registerfinalizer
	F expandcurrent		F registerinitializer
	F export		F registerpage
	T files		F reset
	T data		D runners
	F define		F set
	F found		F setandgetattribute
	F get		F setcomponent
	F filter		F setinternalreference

F setlinkmethod	F	findinternal
F setnextinternal	F	flush
F setnextorder	F	get
F setreferencerealpage	F	prepare
D specials	F	process
F splitcomponent	F	setmethod
F splitprefix	F	sort
F splitreference	F	store
F synchronizepage	D	tobesaved
T testrunners	F	unique
F inner	F	userdata
F special	sect	<b>ions</b> table
F special operation	F	autodepth
F special operation with arg	guments F	cct
T testspecials	D	collected
F deltapage	F	current
Γi	F	currentblock
F internal	F	currentid
F page	F	currentlevel
F realpage	F	currentsectionindex
F section	F	depthnumber
F userpage	F	finddata
D tobereferred		findnumber
D tobesaved	F	fullnumber
D tracedpages		getcurrentlevel
T urls		getlevel
T data		getnumber
F define		internalreference
F found		levelmap
F get		levels
Funtex		load
D usedinternals		matchingtilldepth
D usedviews		numberatdepth
F valid registers tab	_	numbers
-		popblock prefixedconverted
F analyze D collected		pushblock
F compare		register
F define		registered
F enhance		reportstructure
F extend		save
F filter		sectionblockdata
F filtercollected	•	T bodypart
F finalize		S bookmark
:=::======		

F set		tags	table
F setblock		F elementtag	
F setchecker		F finishexport	
F setentry		F getid	
F setinitialblock		F getmetadata	
F setlevel		F handler	
F setnumber		F initializeexport	
F structuredata		D labels	
F title		F last	
D tobesaved		F lastinchain	
F typesetnumber		F locatedtag	
F userdata		T patterns	
B verbose		U splitter	
sets	table	D properties	
F define		F registermetadata	
F get		F restart	
F getall		F setaspect	
D setlist		F setattributehash	
specials	table	F setcombination	
D collected		F setconstruct	
F retrieve		F setfigure	
F store		F sethighlight	
D tobesaved		F setitem	
synonyms	table	F setitemgroup	
F analyzed		F setlist	
D collected		F setnotation	
F compare		F setnotationsymbol	
F define		F setproperty	
F filter		F setregister	
F finalize		F setsorting	
F flush		F setsynonym	
F isshown		F settablecell	
F isused		F settabulatecell	
F meaning		F settagdelimitedsymb	ol
F prepare		F settagsubsentencesy	mbol
F process		F setupexport	
F register		F setuserproperties	
F registershown		D specifications	
F registerused		F start	
F resetshown		F stop	
F resetused		F strip	
F sort		D taglist	
F synonym		T usewithcare	
D tobesaved		T images	

### table (basic lua)

allkeys	function	prepend	function
append	function	print	function
are_equal	function	remove	function
autokey	function	reverse	function
collapsed	function	reversed	function
collapsedhash	function	save	function
compact	function	sequenced	function
concat	function	serialize	function
contains	function	setmetatablecall	function
сору	function	setmetatableindex	function
count	function	setmetatablekey	function
derive	function	setmetatablenewindex	function
deserialize	function	sort	function
drop	function	sorted	function
fastcopy	function	sortedhash	function
fastserialize	function	sortedhashkeys	function
filtered	function	sortedhashonly	function
flattened	function	sortedindexonly	function
fromhash	function	sortedkeys	function
getmetatablekey	function	sortedpairs	function
has_one_entry	function	sparse	function
hashed	function	strip	function
identical	function	sub	function
imerge	function	swapped	function
imerged	function	tocontext	function
insert	function	tocsv	function
is_empty	function	tofile	function
is_simple_table	function	tohandle	function
keys	function	tohash	function
load	function	toxml	function
loweredkeys	function	twowaymapper	function
merge	function	unique	function
merged	function	unnest	function
mirrored	function	unpack	function
pack	function	values	function

## tex (basic tex)

		_	
attribute	table	getmuglue	function
badness	function	getmuskip	function
box	table	getnest	function
catcode	table	getsfcode	function
conditionals	data table	getskip	function
constants	data table	gettoks	function
count	table	getuccode	function
cprint	function	glue	table
ctdcatcodes	number	hashtokens	function
ctxcatcodes	number	ifs	data table
definefont	function	inicatcodes	number
delcode	table	init_rand	function
dimen	table	isattribute	function
directives	data table	isbox	function
enableprimitives	function	iscount	overloaded function
error	function	isdefined	function
extraprimitives	function	isdimen	overloaded function
finish	function	ismuskip	overloaded function
fontidentifier	function	isskip	overloaded function
fontname	function	istoken	function
force_synctex_line	function	istoks	function
force_synctex_tag	function	lccode	table
fprint	function	linebreak	function
get	function	lists	table
get_synctex_line	function	lua_math_random	function
get_synctex_mode	function	lua_math_randomseed	function
get_synctex_tag	function	luacatcodes	number
getattribute	function	mathcode	table
getbox	function	modes	data table
getboxresourcedimensions	function	muglue	table
getcatcode	function	muskip	table
getcount	function	nest	table
getdelcode	function	nilcatcodes	number
getdelcodes	function	normal_rand	function
getdimen	function	notcatcodes	number
getglue	function	number	function
getlccode	function	primitives	function
getlist	function	print	function
getmath	function	prtcatcodes	number
getmathcode	function	resetparagraph	function
getmathcodes	function	romannumeral	function

round	function	setuccode	function
run	function	sfcode	table
saveboxresource	function	shipout	function
scale	function	show_context	function
scantoks	function	skip	table
set	function	sp	function
set_synctex_line	function	splitbox	function
set_synctex_mode	function	sprint	function
set_synctex_tag	function	systemmodes	data table
setattribute	function	takebox	function
setbox	function	texcatcodes	number
setcatcode	function	toks	table
setcount	function	tpacatcodes	number
setdelcode	function	tpbcatcodes	number
setdimen	function	tprint	function
setglue	function	trackers	data table
setlccode	function	triggerbuildpage	function
setlist	function	txtcatcodes	number
setmath	function	type	function
setmathcode	function	uccode	table
setmuglue	function	uniform_rand	function
setmuskip	function	uniformdeviate	function
setnest	function	uprint	function
setsfcode	function	useboxresource	function
setskip	function	vrbcatcodes	number
settoks	function	write	function

#### texconfig (basic tex)

error\_line number
expand\_depth number
formatname string
half\_error\_line number
hash\_extra number

kpse\_init boolean
max\_in\_open number

max\_print\_line number
max\_strings number
nest\_size number
param\_size number
save\_size number
shell escape string

### texio (basic tex)

setescape function
write function

write\_nl function

### token (basic tex)

create	function	is_token	function
get_active	function	put_next	function
get_cmdname	function	scan_code	function
get_command	function	scan_csname	function
get_csname	function	scan_dimen	function
get_expandable	function	scan_glue	function
get_id	function	scan_int	function
get_index	function	scan_keyword	function
get_macro	function	scan_string	function
get_meaning	function	scan_token	function
get_mode	function	scan_toks	function
get_next	function	scan_word	function
get_protected	function	set_macro	function
get_tok	function	type	function

### tokens (context)

astable	function	defined	function
bgroup	userdata	egroup	userdata
bits	table	getters	table
N active		F box	
N alignmen	t	F count	
N begingro	up	F dimen	
N characte	r	F glue	
N close		F macro	
N comment		F meaning	
N endgroup		F skip	
N endoflin	е	F token	
N escape		hbox	userdata
N ignore		istoken	function
N invalid		letter	function
N letter		letters	function
N mathshif	t	other	function
N open		pickup	function
N other		printlist	function
N paramete	r	scanners	table
N space		F boolean	
N subscrip	t	F code	
N superscr	ipt	F conditio	nal
N whitespa	ce	F count	
collectors	table	F csname	
T data		F dimen	
F defaultw	ords	F dimensio	n
F dowithwo	rds	F glue	
F flush		F integer	
F install		F keyword	
F register		F list	
T register	ed	F lxmlid	
F show		F number	
F test		F scanclos	e
compile	function	F scanopen	
constant	function	F skip	
converters	table	F string	
S toboolea	n	F token	
S todimen		F tokens	
S toglue		F toks	
S tonumber		F word	
S tostring		scantable	function

<b>setters</b> table	F boolean
F box	F code
F count	F conditional
F dimen	F count
F glue	F csname
F macro	F dimen
F skip	F dimension
<b>shortcuts</b> table	F glue
T bits	F integer
N active	F keyword
N alignment	F list
N begingroup	F lxmlid
N character	F number
N close	F scanclose
N comment	F scanopen
N endgroup	F skip
N endofline	F string
N escape	F token
N ignore	F tokens
N invalid	F toks
N letter	F word
N mathshift	F scannumber
N open	F scanopen
N other	F scanstring
N parameter	F scanword
N space	F toboolean
N subscript	F todimen
N superscript	T tokens
N whitespace	F astable
N close	U bgroup
F inspect	T collectors
N open	F defaultwords
F report	F dowithwords
F scanboolean	F flush
F scanclose	F install
F scancode	F register
F scanconditional	F show
F scancsname	F test
F scandimen	F compile
F scandimension	F constant
F scaninteger	T converters
F scankeyword	S toboolean
F scanlist	S todimen
T scanners	S toglue

N close S tonumber S tostring F inspect F defined N open U egroup F report T getters F scanboolean F box F scanclose F count F scancode F dimen F scanconditional F scancsname F glue F macro F scandimen F scandimension F meaning F scaninteger F skip F token F scankeyword F scanlist U hbox F scannumber F istoken F letter F scanopen F letters F scanstring F other F scanword F pickup F toboolean F printlist F todimen F scantable F tonumber T setters F tostring F box U vbox F count U vtop F dimen F tonumber F tostring F glue F macro vbox userdata

F skip T shortcuts vtop

userdata

#### tracers (context)

count function
cs function
dimen function
knownlist function
lists table

T context
T internals

T scratch

name function

primitive function
printerror function
printwarning function
showlines function
strings table

S undefined

toks function
type function

### trackers (context)

data	data table	register	function
default	function	report	function
disable	function	reset	function
dumphashtofile	function	savehash	function
enable	function	show	function
list	function	value	function
name	string		

## typesetters (context)

alignments	table	T handlers	
	table		
F handler		F installhandler	
F set	+-h1-	F processmath	
breakpoints	table	F set	
F define		F setcolor	
F handler		F setmath	
D mapping		F tomode	
T methods		firstlines	table
T numbers		T actions	
F set		F default	
F setreplacement		F line	
cases	table	F word	
T actions		F handler	
F handler		F set	
F register		fontkerns	table
F set		F handler	
characteralign	table	initials	table
F handler		T actions	
F resetcharacter	align	F default	
F setcharacteral	ign	F addanchortoline	
characters	table	F addtoline	
F handler		F calculatedelta	
T methods		F checkline	
F replacenbsp		F handler	
F replacenbspace	s	F moveinline	
checkers	table	F normalize	
F handler		F set	
F reset		injectors	table
F set		F check	
cleaners	table	T list	
F handler		F mark	
F set		F reset	
digits	table	F set	
T actions		F show	
F handler		italics	table
F set		F enablemath	
directions	table	F enabletext	
F getfences		F forcevariant	
F getglobal		F handler	
F getmethod		F reset	
F handler		F set	

kerns	table	F reset	
D factors	cable	F split	
F handler		·	
		F startapply	
F keepligature		F stopapply	
B keeptogether		F stripped	
D mapping		F tostring	+1-
F set	table	rubies	table
manipulators	table	F attach	
F apply		F check	function
F applyspecifi	cation	showsuspects	function
T methods		spacings	table
F Word		F define	
F Words		F handler	
F abbreviate	-	D mapping	
F expandedjo	urnal	T numbers	
F lowercase		T frenchpunct	
F stripperio	d	T character	S
F uppercase		S name	
T patterns		N number	
U list		F reset	
U pair		F set	
F splitspecifi		F setup	
margins	table	wrappers	table
F finalhandler		F handler	
F globalhandle		xtables	table
F localhandler		F cleanup	
F save		F construct	
marksuspects	function	F create	
paragraphs	table	F finish_row	
F addanchortol	ine	F flush	
F addtoline		F initialize_c	
F calculatedel	ta	F initialize_r	
F checkline		F initialize_r	eflow_width
F handler		F next_row	
F moveinline		F reflow_heigh	t
F normalize		F reflow_width	
F set		F set_construc	
processors	table	F set_reflow_h	
F apply		F set_reflow_w	idth
F register			

### unicode (extra lua)

scii	table	F len	
F byte		F lower	
F char		F match	
F dump		F rep	
F find		F reverse	
F format		F sub	
F gfind		F upper	
F gmatch		toutf32string	function
F gsub		utf8	table
F len		F byte	
F lower		F char	
F match		F characters	
F rep		F chrlen	
F reverse		F count	
F sub		F dump	
F upper		F filetype	
<b>jrapheme</b>	table	F find	
F byte		F format	
F char		F gfind	
F dump		F gmatch	
F find		F gsub	
F format		F is_valid	
F gfind		F len	
F gmatch		F length	
F gsub		F lower	
F len		F magic	
F lower		F match	
F match		F remapper	
F rep		F rep	
F reverse		F replacer	
F sub		F reverse	
F upper		F split	
atin1	table	F splitlines	
F byte		F sub	
F char		F subtituter	
F dump		F tocodes	
F find		F toeight	
F format		F toentities	
F gfind		F tostring	
F gmatch		F totable	
F gsub		F upper	

F ustring
F utf16\_to\_utf8\_be
F utf16\_to\_utf8\_be\_t
F utf16\_to\_utf8\_le
F utf16\_to\_utf8\_le\_t
F utf16\_to\_utf8\_t
F utf32\_to\_utf8\_be
F utf32\_to\_utf8\_be\_t
F utf32\_to\_utf8\_be\_t
F utf32\_to\_utf8\_le

F utf32\_to\_utf8\_le\_t
F utf32\_to\_utf8\_t
F utf8\_to\_utf16
F utf8\_to\_utf16\_be
F utf8\_to\_utf16\_le
F utf8\_to\_utf8\_t
F values
F xstring

#### url (context)

addscheme	function
barepath	function
construct	function
escape	function
filename	function
hashed	function

hasscheme function
query function
split function
toquery function
unescapeget function

### utilities (context)

debugger	table	F skiplong	
F disable		F skipposition	
F enable		F skipshort	
F savestats		F writebyte	
F showstats		F writecardinal2	
F showtraceback		F writecardinal4	
files	table	F writestring	
F close		formatters	table
F getposition		F formatcolumns	
F getsize		F list	
F look		F stripzeros	
F open		garbagecollector	table
F read2dot14		F check	
F readbyte		N criterium	
F readbytes		B enabled	
F readbytetable		lua	table
F readcardinal		B alwaysstripcode	
F readcardinal1		F checkmemory	
F readcardinal2		F compile	
F readcardinal2le		F loadedluacode	
F readcardinal3		F loadstripped	
F readcardinal3le		N nofstrippedbytes	
F readcardinal4		N nofstrippedchunk	5
F readcardinal4le		F registerfinalize	r
F readchar		B stripcode	
F readfixed2		T strippedchunks	
F readfixed4		F strippedloadstri	ng
F readinteger		T suffixes	
F readinteger1		S lua	
F readinteger2		S luc	
F readinteger2le		S lui	
F readinteger3		S luj	
F readinteger3le		S luv	
F readinteger4		S tma	
F readinteger4le		S tmc	
F readsignedbyte		S tua	
F readstring		S tuc	
F readtag		packers	table
F setposition		F hashed	
F size		F new	
F skip		F pack	

```
F simplehashed
                                                                                                                                                  B latin-modern-light-designsize
                                                                                                                                                  B modern-light
        F strip
                                                                                                                                              T modern-mono.modern-base-mono
        F unpack
                                                                                                                                                  B modern-base-mono
        N version
                                                  table
parsers
                                                                                                                                                  B modern-mono
        F add settings to array
                                                                                                                                              T modern-variable, latin-modern-variable-designsize, la
        F arguments_to_table
                                                                                                                                                  B latin-modern-variable
                                                                                                                                                  B latin-modern-variable-designsize
        F array to string
        F csvsplitter
                                                                                                                                                  B modern-variable
                                                                                                                                              T modernvariable.modern-variable
        F getparameters
        F groupedsplitat
                                                                                                                                                  B modern-variable
        F hash to string
                                                                                                                                                  B modernvariable
       T hashes
                                                                                                                                               T modernvariablelight, modern-variable-light
                                                                                                                                                  B modern-variable-light
           T settings to set
               T max, fit, broad, auto
                                                                                                                                                  B modernvariablelight
                   B auto
                                                                                                                                              T serif.sans.mono
                   B broad
                                                                                                                                                  B mono
                  R fit
                                                                                                                                                  R sans
                                                                                                                                                  B serif
                  R max
               T modern, latin-modern
                                                                                                                                              T text, hidden, paper, page, leftpage, rightpage
                   B latin-modern
                                                                                                                                                  B hidden
                  B modern
                                                                                                                                                  B leftpage
               T\ modern, latin-modern-variable, latin-modern-variable, modern-wariable, modern-wariable
                   B latin-modern
                                                                                                                                                  B paper
                   B latin-modern-condensed
                                                                                                                                                  B rightpage
                   B latin-modern-variable
                                                                                                                                                  B text
                                                                                                                                        F iterator
                  B modern
                  B modern-condensed
                                                                                                                                        F keq to hash
                   B modern-variable
                                                                                                                                        F listitem
               T modern, latin-modern-designsize, latin-modern
                                                                                                                                        F make_settings_to_hash_pattern
                   B latin-modern
                                                                                                                                        F mergehashes
                  B latin-modern-designsize
                                                                                                                                        F options to array
                   R modern
                                                                                                                                        F options to hash
               T modern, modern-base
                                                                                                                                        T patterns
                   B modern
                                                                                                                                           U settings_to_array
                  B modern-base
                                                                                                                                           U settings to hash a
               T modern-condensed, latin-modern-condensed-designsize, latin Umosdetrbingsngdeen_beadshmodern-light-condensed, latin-modern-l
                   B latin-modern-condensed
                                                                                                                                           U settings_to_hash_c
                                                                                                                                           U unittotex
                  B latin-modern-condensed-designsize
                  B latin-modern-light-condensed
                                                                                                                                        F process stripped settings
                   B modern-condensed
                                                                                                                                        F rfc4180splitter
                   B modern-light-condensed
                                                                                                                                        F runtime
               T modern-light, latin-modern-light-designsize, latin-modernFlightings to array
                   B latin-modern-light
                                                                                                                                        F settings_to_array_obey_fences
```

F settings_to_arra	v with reneat	F	initialize	
F settings_to_hash			list	
F settings_to_hash			new	
F settings_to_hash			register	
F settings_to_numb	_		report	
F settings_to_set	CIS		reset	
F simple_hash_to_s	trina		show	
F splitmethod	cring	stac		table
F splitthousands			new	cabic
F stepper		stor		table
F stripped_setting	s to array		allocate	cabec
F unittotex	5_co_urray		checked	
F unittoxml			mark	
randomizer	table		marked	
F get			setinitializer	
F getnumber			sparse	
F getseed		stre		table
F popseed			close	cabic
F pushseed			getposition	
F reuseseed			look	
F setseed			open	
F setseedi			read2dot14	
report	function		read2dot4	
sequencers	table		readbyte	
F appendaction			readbytes	
F appendgroup			readbytetable	
F compile			readcardinal	
F disableaction			readcardinal1	
F disablegroup			readcardinal2	
F enableaction		F	readcardinal2LE	
F enablegroup		F	readcardinal3	
D functions		F	readcardinal3le	
F localize		F	readcardinal4	
F new		F	readchar	
F nodeprocessor		F	readfixed2	
F prependaction		F	readfixed4	
F prependgroup		F	readinteger	
F removeaction		F	readinteger1	
F replaceaction		F	readinteger2	
F setkind		F	readinteger2le	
F tostring		F	readinteger3	
setters	table	F	readinteger3le	
F disable		F	readinteger4	
F enable		F	readinteger4le	

F readsignedbyte	
F readstring	
F setposition	
F size	
F skip	
F skipbytes	
F skiplong	
F skipshort	
rings	table

#### str F collapsecrlf T formatters F add F new F newcollector F newrepeater F nice T striplinepatterns

U	collapse
U	prune
U	prune and collapse
U	prune and no empty
U	retain

ı	U retain	and co	llapse
ı	U retain	and no	empty
F	striplin	es	
F	striplon	g	
F	tabtospa	ce	
Т	tracers		
table	es		table
F	accessta	ble	
F	definedt	able	
F	defineta	ble	

F encapsulate F insertaftervalue F insertbeforevalue F migratetable F removevalue F replacevalue

templates table F load

#### vf (context)

char	function
down	function
fontid	function
image	function
node	function
nop	function

pop function
push function
right function
rule function
special function

### visualizers (context)

escapepatterns	data table	signal	string
getspecification	function	signalpattern	userdata
getvisualizer	function	specifications	data table
load	function	visualize	function
makenested	function	visualizebuffer	function
makepattern	function	visualizefile	function
newgrammar	function	visualizestring	function
newhandler	function	write	function
parsedxml	function	writeargument	function
pattern	function	writedefault	function
register	function	writeemptyline	function
registerescapecommand	function	writenewline	function
registerescapeline	function	writespace	function
registerescapepattern	function		

### xml (context)

addentitiesdoctype	function	defaulthandlers	table
addspecialcode	function	D file	cabic
after	function	D parsedxml	
all	function	D string	
applylpath	function	D tex	
applyselector	function	D texline	
assign	function	D texspace	
attribute	function	D verbose	
badinclusions	function	defaultprotocol	string
before	function	delete	function
body	function	delete element	function
builtinentities	table	despecialized	function
B amp		each	function
B apos		each element	function
B gt		elements	function
B lt		elementtocdata	function
B quot		empty	function
cdata	function	entities	data table
cdatatotext	function	erase	function
checkbom	function	errorhandler	function
checkerror	function	escaped	function
checknamespace	function	expressions	table
checkns	function	F boolean	
cleansed	function	F child	
collect	function	F contains	
collect_elements	<del>function</del>	F count	
collect_tags	function	F error	
collect_texts	<del>function</del>	F find	
collected	function	F idstring	
collecttexts	function	F lower	
content	function	F name	
convert	function	F number	
сору	function	F oneof	
count	function	F print	
cprint	function	F quit	
css	table	F tag	
F applyselector		F text	
F colorspecification		F undefined	
F dimension		F upper	
F fontspecification		fillin	function
F padding		filter	function

finalizers	table	F index	
F paragraphs		F last	
T tex		F lowerall	
F all		F match	
F attribute		F name	
F chainattribute		F position	
F chainpath		F reverse	
F command		F table	
F concat		F tag	
F concatrange		F tags	
F context		F text	
F count		F texts	
F ctxtext		F upperall	
F default		first	function
F first		found	function
F function		functions	table
F index		getbuffer	function
F last		gethandlers	function
F lettered		gethandlersfunction	function
F lower		helpers	table
F lowerall		F recursetext	
F match		include	function
F name		inclusion	function
F position		inclusions	function
F reverse		index	function
F stripped		inheritedconvert	function
F tag		inject	function
F tags		inject_element	function
F text		<del>inject_element_after</del>	<b>function</b>
F upper		<pre>inject_element_before</pre>	function
F upperall		injectafter	function
T xml		injectbefore	function
F all		insert	function
F att		insert_element	function
F attribute		<pre>insert_element_after</pre>	function
F attributes		<pre>insert_element_before</pre>	<b>function</b>
F cdata		insertafter	function
F chainattribute		insertbefore	function
F count		insertcdata	function
F default		insertcomment	function
F elements		inspect	function
F empty		is_valid	function
F first		kind	function
F function		last	function

lastmatch	function	replace	function
load	function	replace_element	function
lpath	function	resetinjectors	function
lpathcached	function	resolvens	function
lpathcalls	function	root	function
lshow	function	save	function
makestandalone	function	selection	function
match	function	separate	function
name	function	serialize	function
newhandlers	function	serializetotext	function
nodesettostring	function	setcdata	function
originalload	function	setcomment	function
package	function	sethandlersfunction	function
parent	function	setinjectors	function
parsedentitylpeg	userdata	setproperty	function
pihandlers	table	settings	function
F injector		specialcodes	table
F tex		S "	
placeholders	table	S #	
F unknown_any_entity		S \$	
F unknown_dec_entity		S %	
F unknown_hex_entity		S &	
popmatch	function	S '	
position	function	S <	
privatecodes	table	S >	
privatetoken	function	S \	
process	function	S {	
<pre>process_attributes</pre>	<del>function</del>	S	
process_elements	<del>function</del>	S }	
processattributes	function	S ~	
profiled	table	specialhandler	table
pushmatch	function	sprint	function
raw	function	string	function
registerentity	function	strip	function
registerns	function	<pre>strip_whitespace</pre>	<b>function</b>
reindex	function	stripelement	function
remap_name	<del>function</del>	stripleadingspaces	function
remap_namespace	<del>function</del>	table	function
remap_tag	<del>function</del>	text	function
remapname	function	textonly	function
remapnamespace	function	texttocdata	function
remaptag	function	tocdata	function
renamespace	function	toelement	function
reparsedentitylpeg	userdata	tostring	function

totable	function	unprivatized	function
toxml	function	unspecialized	function
tprint	function	withelement	function
traverse	function	withelements	function
unescaped	function	wrap	function
unescapedentitylpeg	userdata	xmlns	table

#### zip (extra lua)

archivestableopenarchivefunctionclosefunctionopenfilefunctionclosearchivefunctionregisteredfilestableopenoverloaded functiontypefunction

#### zlib (extra lua)

adler32 function
compress function
compressobj function
crc32 function

decompress function
decompressobj function
version function