SPICE Documentation Taxonomy

Arranged by Category

March 2006

General Reading, including installing the SPICE Toolkit

Document Name	File Name	Location	Description/Comments
Introduction to SPICE	intrdctn.req	T	An introduction to SPICE
SPICE Tutorials	many *.ppt/doc/xls or *.pdf	TUTOR	A collection of about 30 viewgraph packages providing tutorial information on nearly all components of the SPICE system.
Instructions for getting the Toolkit components from NAIF's FTP server	README	GETTK	Description of the files to be FTP'd in order to get, install and use the SPICE Toolkit.
Toolkit Contents	dscriptn.txt	T	Describes the structure and contents of the Toolkit
New features and major changes	whats.new	T	Describes significant new features added to the Toolkit since the last version.

TUTOR = Tutorials on NAIF web pages (http://naif.jpl.nasa.gov/tutorials.html)
T = SPICE Toolkit, in the /doc subdirectory
GETTK = Go to the desired language and then platform under ftp://naif.jpl.nasa.gov/pub/naif/toolkit

General SPICE Programming

Document Name	File Name	Location	Description/Comments
Must Useful SPICE Subroutines	mostused.*	T	Practical but terse specifications, including examples, for many popular routines. (Postscript version in Toolkit; MS Word version on FTP server.)
Permuted Index (SPICELIB or CSPICE)	spicelib.idx or cspice.idx	T	Permuted index built from the “Brief Abstract” found in every routine. Helps focus your search for a routine that meets your needs.
CSPICE Required Reading	cspice.req	T	A discussion of how CSPICE is produced and how to use it.
Getting Started	getting_started.ppt or *.pdf	TUTOR	Tips for getting started on programming with SPICE modules.
Module headers	*.f or *_c.c	T	Each module (subroutine) in SPICELIB and CSPICE contains an extensive "header" providing the detailed specifications for the routine needed by a programmer. Examples are included.
NAIF IDs reference	naif_ids.req	T	A summary of numeric ID codes used throughout the SPICE system
Error Required Reading	error.req	T	Reference for configuring and using the exception handling system built-in to SPICELIB and CSPICE
Common Problems	problems.req	T	A discussion of the most commonly encountered problems using SPICE

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Ephemerides for spacecraft and solar system bodies (SPK Subsystem)

Document Name	File Name	Location	Description/Comments
SPK Tutorial	spk.ppt or .pdf	TUTOR	Tutorial on using SPK files
Making an SPK Tutorial	making_an_spk	TUTOR	Tutorial on making an SPK file
Using Frames Tutorial	using_frames.ppt or .pdf	TUTOR	Tutorial on using frames, including in SPK routines
SPK Required Reading	spk.req	T	Reference for the SPK subsystem
Frames Required Reading	frames.req	T	Reference for working with reference frames
NAIF IDs Required Reading	naif_ids.req	T	Summarizes numeric ID codes used throughout the SPICE system
SPC Required Reading	spc.req	T	Reference for use of the "comment area" in binary kernels
BRIEF User's Guide	brief.ug	T	BRIEF produces a concise summary of the contents/coverage of an SPK file.
SPACIT User's Guide	spacit.ug	T	SPACIT provides file conversion, detailed summarization and read access to internal comments (metadata).
Convert User's Guide	convert.ug	T	Describes use of the command line utilities named TOBIN and TOXFR used to convert binary kernels to transfer format and vice-versa.
Comment User's Guide	commnt.ug	T	Comment is used to add, extract, read and delete comments (metadata) in binary kernels.
SPK Merge User's Guide	spkmerge.ug	T	SPKMERGE is a utility program used to merge two or more SPK files, or to subset a single SPK file.

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Target body size, shape and orientation (PCK Subsystem)

Document Name	File Name	Location	Description/Comments
PCK Tutorial	pck.ppt or pck.pdf	TUTOR	Tutorial viewgraphs on using PC-kernels
PCK Required Reading	pck.req	T	Reference for the PCK subsystem
Frames Required Reading	frames.req	T	Reference for working with reference frames
NAIF IDs Required Reading	naif_ids.req	T	Summarizes numeric ID codes used throughout the SPICE system
Kernel Required Reading	kernel.req	T	Reference for general specifications of text kernels

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Instrument Information Pertinent to SPICE (IK Subsystem)

Document Name	File Name	Location	Description/Comments
IK Tutorial	ik.ppt or ik.pdf	TUTOR	Tutorial viewgraphs on using I-kernels
IK Required Reading	ik.req	T	Reference for the IK subsystem (Toolkit version N0053 or later.)
n/a	*.ti	D	Look at an existing I-kernel; these are text files and contain substantial internal documentation
Frames Required Reading	frames.req	T	Reference for working with reference frames
NAIF IDs Required Reading	naif_ids.req	T	Summarizes numeric ID codes used throughout the SPICE system
Kernel Required Reading	kernel.req	T	Reference for general specifications of text kernels

D = Project Data on NAIF web pages (http://naif.jpl.nasa.gov/naif/data.html)
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Orientation of a Spacecraft or Structure (CK Subsystem)

Document Name	File Name	Location	Description/Comments
CK Tutorial	ck.ppt or ck.pdf	TUTOR	Tutorial viewgraphs on using C-kernels
Using Frames Tutorial	using_frames.ppt or .pdf	TUTOR	Tutorial on using frames, including in transformation modules
CK Required Reading	ck.req	T	Reference for the CK subsystem
Frames Required Reading	frames.req	T	Reference for working with reference frames
NAIF IDs Required Reading	naif_ids.req	T	Summarizes numeric ID codes used throughout the SPICE system
SPC Required Reading	spc.req	T	Reference for use of the "comment area" in binary kernels
Rotations Required Reading	rotation.req	T	Reference for construction and use of rotation matrices within the SPICE context
CKBRIEF User's Guide	ckbrief.ug	T	CKBRIEF produces a concise summary of the contents/coverage of an SPK file.
SPACIT User's Guide	spacit.ug	T	SPACIT provides file conversion, detailed summarization and read access to internal comments (metadata).
Convert User's Guide	convert.ug	T	Describes use of the command line utilities named TOBIN and TOXFR used to convert binary kernels to transfer format and vice-versa.
Comment User's Guide	commnt.ug	T	COMMENT is used to add, extract, read and delete comments (metadata) in binary kernels.
DAFCAT User's Guide	dafcat.ug	T	DAFCAT provides a very simple and simplistic file merge capability for CK files.

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Connectivity of Reference Frames (FK Subsystem)

Document Name	File Name	Location	Description/Comments
Frames Tutorial	fk.ppt or fk.pdf	TUTOR	Tutorial viewgraphs on contents of a Frames kernel
Using Frames	using_frames.ppt or using_frames.pdf	TUTOR	Tutorial viewgraphs on using Frames kernels
Dynamic Frames	dynamic_frames.ppt or dynamic_frames.pdf	TUTOR	Tutorial on defining/implementing custom so-called dynamic frames
n/a	*.tf	N	Look at an existing Frames kernel; these are text files and contain substantial internal documentation
Frames Required Reading	frames.req	T	Reference for the Frames subsystem
NAIF IDs Required Reading	naif_ids.req	T	Summarizes numeric ID codes used throughout the SPICE system
Rotations Required Reading	rotation.req	T	Reference for construction and use of rotation matrices within the SPICE context
Kernel Required Reading	kernel.req	T	Reference for general specifications of text kernels

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"EVENTS", broken down into three sub-products (EK Subsystem)

Document Name	File Name	Location	Description/Comments
Introduction to EK subsystem	ek_intro.ppt or ek_intro.pdf	TUTOR	Tutorial Introduction to the Events subsystem
ESP Tutorial	ek_esp.ppt or ek_esp.pdf	TUTOR	Tutorial viewgraphs on the Science Plan Component of the EK subsystem (ESP)
ESQ Tutorial	ek_esq.ppt or ek_esq.pdf	TUTOR	Tutorial viewgraphs on the Sequence Component of the EK subsystem (ESQ)
ENB Tutorial	ek_enb.ppt or ek_enb.pdf	TUTOR	Tutorial viewgraphs on the Experimenter's Notebook Component of the EK subsystem (ENB)
EK Required Reading	ek.req	T	Reference for the Events-kernel subsystem

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Time Conversion

Document Name	File Name	Location	Description/Comments
Time Tutorial	time.ppt or time.pdf	TUTOR	Tutorial viewgraphs on time conversions
Time Required Reading	time.req	T	Reference on time systems (excluding SCLK)
SCLK Required Reading	SCLK.req	T	Reference on spacecraft clock time
CHRONOS User's Guide	chronos.ug	T	CHRONOS is a full-featured, flexible time conversion utility program
Kernel Required Reading	kernel.req	T	Reference for general specifications of text kernels

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