

Verisoft Repository Modules and Their Dependencies

Module	Name	Source	Maintainer	Information
Verification Environment				
Isabelle	Isabelle Theorem Prover	/tools/Isabelle	StefanBerghofer TobiasNipkow MakariusWenzel	
libisa	Isabelle Lemma Library	/verification/libisa		
NuSMV	NuSMV model checker	/tools/NuSMV	(third party)	
Hoare	Hoare Logic	/tools/Hoare	NorbertSchirmer	
libHoare	Hoare Logic Library	/lverification/libHoare		
Development Environment / Tool Chain				
dlxasm	DLX Assembler	/tools/dlxasm	MarkHillebrand	
dlxsim	DLX Simulator	/tools/dlxsim	MarkHillebrand	
c0check	C0 checker and preprocessor	/tools/c0check	DirkLeinenbach ArtemStarostin	
stdinclude	Standard C0 Include Files	/implementation/software/include	MatthiasDaum	
rpcgen	SOS RPC Interface Generator	/tools/rpcgen	AndreyShadrin	
VAMPfpga	VAMP FPGA Implementation (non-verified parts)	/implementation/hardware/VAMPfpga	DirkLeinenbach	
Computational Models / Specifications / Semantics				
Devices	I/O Devices	/verification/spec/Devices	JanDoerrenbaecher MareikeSchmidt MarkHillebrand SergeyTverdyshev	
VAMPisa	VAMP Instruction Set Architecture	/verification/spec/VAMPisa	SergeyTverdyshev	
VAMPisaDevices	VAMP Instruction Set Architecture with Devices	/verification/spec/VAMPisaDevices	SergeyTverdyshev	
VAMPasm	VAMP Assembler Semantics	/verification/spec/VAMPasm	AlexandraTsyban	
VAMPasmDevices	VAMP Assembler Semantics plus Devices	/verification/spec/VAMPasmDevices	?	
C0syntax	C0 / C0A Common Syntax	/verification/spec/C0syntax	DirkLeinenbach MartinWildmoser	
C0SS	C0 small-steps semantics	/verification/spec/C0SS	DirkLeinenbach	ITB:8
C0ASS	C0A small- steps semantics with	/verification/spec/C0ASS	AlexandraTsyban	
C0SSLink	Abstract Linking for the C0 / C0A Small-Steps Semantics	/verification/spec/C0SSLink	TomInderRieden	
C0BS	C0 big-steps semantics	/verification/spec/C0BS	NorbertSchirmer MartinWildmoser	
C0BSSSequiv	C0 BS to SS equivalence	/verification/proof/C0BSSSequiv	MartinWildmoser	
cvm	CVM Specification	/verification/spec/cvm	TomInderRieden	ITB:10

vamos	VAMOS Specification	/verification/spec/vamos	JanDoerrenbaecher	ITB:38
libvamos	libvamos / VAMOS+C0 Specification	/verification/spec/filesystem	MatthiasDaum	
sos	SOS Specification	/verification/spec/sos	SebastianBogan	ITB:13, ITB:50, ITB:68
DOLOS	Distributed OLOS Specification	/verification/spec/DOLOS	SteffenKnapp	
AFTM	AutoFocus Task Model	/verification/spec/AFTM	JewgenijBotaschanjan	
HoareToBigStep	C0 Hoare Logic to C0 Big Step Semantics Equivalence Proofs	/verification/proof/HoareToBigStep	NorbertSchirmer	
Hardware				
iabc	Automotive Bus Controller Implementation	/implementation/hardware/abc	SteffenKnapp	
VAMPasm2isaSystem	VAMP Assembler to ISA Equivalence (System Mode)	/mod/verification/proof/VAMPasm2isaSystem	AlexandraTsyban SergeyTverdyshev	
VAMPasm2isaUser	VAMP Assembler to ISA Equivalence (User Mode) / Abstract Page Fault Handler Correctness	/verification/proof/VAMPasm2isaUser	?	
Datastructures and Algorithms				
idList	Doubly-linked lists library	/implementation/software/dList	ArtemStarostin	
vdList	Code verification doubly-linked lists library	/lverification/dList	ArtemStarostin	
iString	String library	/implementation/software/String	ArtemStarostin	
vString	Code verification string library	/lverification/String	ArtemStarostin	
ibigInt	Big number library	/implementation/software/bigInt	SabineFischer EricHaschke	
vbigInt	Code verification big number library	/lverification/bigInt	SabineFischer EricHaschke	
igraph	Directed graph library	/implementation/software/graph	RainerBrunotte	
vgraph	Code verification graph library	/lverification/graph	RainerBrunotte	
iset	Hash set library	/implementation/software/set	AndreasNeufang	
Compiler				
ic0compiler	C0 Compiler Implementation (without frontend)	/implementation/software/c0compiler	ElenaPetrova	
vc0compiler	C0 Compiler Verification (without	/lverification/c0compiler	ElenaPetrova	

frontend)

igc	Copying Garbage Collector for C0	/implementation/software/gc	ElenaPetrova	
C0compilercodegen	C0 Compiler Code Generation Specification	/verification/spec/C0compilercodegen	DirkLeinenbach	ITB:5
C0compilersimulation	C0 Compiler Simulation Theorem	/verification/proof/C0compilersimulation	DirkLeinenbach	ITB:5

Communicating Virtual Machines

icvm	CVM Implementation	/implementation/software/cvm	MatthiasDaum MarkHillebrand	ITB:30
vpfh	CVM Page Fault Handler Code	/mod/llverification/pfh	ArtemStarostin	
vcvm	Verification CVM Code Verification	/llverification/cvm	AlexandraTsyban	

VAMOS Microkernel

ivamos	VAMOS Implementation	/implementation/software/vamos	MatthiasDaum JanDoerrenbaecher	
vvamos	VAMOS Code Verification	/llverification/vamos	JanDoerrenbaecher	

ilibvamos	VAMOS C0 System Call Library	/implementation/software/libvamos	MatthiasDaum JanDoerrenbaecher	ITB:67
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OSEKTime-like Operating System

iolos	OLOS Implementation	/implementation/software/olos	SteffenKnapp	
ilibolos	OLOS C0 System Call Library	/implementation/software/libolos	SteffenKnapp	
ieCall	eCall Applications	/implementation/software/eCall	AlexanderHarhurin JewgenijBotaschanjan	

LeonidKof

Simple Operating System

isos	SOS Implementation	/implementation/software/sos	SebastianBogan ChristianHenrich	
ilibsos	SOS C0 System Call Library	/implementation/software/libsos	SebastianBogan ChristianHenrich	
ipm	SOS Portmapper Implementation	/implementation/software/pm	AndreyShadrin	
ilibpm	SOS C0 Portmapper Interface	/implementation/software/libpm	AndreyShadrin	
isosrpc	SOS RPC (a meta package)	/implementation/software/sosrpc	SebastianBogan AndreyShadrin	
vfilesystem	SOS Filesystem	/llverification/filesystem	ElenaPetrova	

Verification

SOS Applications

isignature	Signature Server	/implementation/software/signature	GeorgRock
ismtp	SMTP Server and Client	/implementation/software/smtp	BrunoLangenstein GeorgRock
iemail	E-Mail Client Implementation	/implementation/software/email	GerdBeuster
vemail	E-Mail Client Code Verification	/lverification/email	GerdBeuster

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