

# INDEX

## Symbols

.....2-23  
 \$PTARCH ..... 1-2  
 \$PTOLEMY ..... 1-3  
 % operator ..... 2-19, 12-5  
 .alias file ..... 1-2, 1-12  
 .cc files..... 2-4  
 .cshrc file ..... 1-2  
 .h files ..... 2-4  
 .html files..... 2-4  
 .pl file..... 2-1, 7-1  
 = operator..... 2-19  
 ~ptolemy..... 1-3

## A

A ..... 2-10  
 A\_CONSTANT attribute..... 2-10  
 A\_NONCONSTANT attribute..... 2-10, 2-21  
 A\_NONSETTABLE attribute ..... 2-10  
 A\_SETTABLE attribute..... 2-10, 2-21  
 AB\_CIRC attribute ..... **13-13**  
 AB\_CONSEC attribute ..... **13-13**  
 accessMessage method  
     MessageParticle class ..... 4-18  
 ACG class ..... 3-17  
 acknowledge pflang directive ..... 2-6, **2-8**  
 ACYLOOP, SDF scheduler option ..... 13-21  
 Add (SDF block) ..... 2-20  
 addCode (CGStar method) ..... 14-2, 14-7  
 addCompileOption (CGCTarget method) ..... 14-2  
 addDeclaration (CGCStar method) ..... 14-2  
 AddFix (SDF block) ..... 4-5  
 addGlobal (CGCStar method) ..... 14-2  
 addInclude (CGCStar method) ..... 14-2  
 addLinkOption (CGCTarget method) ..... 14-2  
 aggressive reclamation ..... 4-18  
 aliases  
     exp ..... 1-12  
     mkl..... 1-12  
     objdir ..... 1-2  
     pt..... 1-12  
     ptl..... 1-12  
     rml ..... 1-12  
     srcdir..... 1-2  
     sw ..... 1-12  
 aliases for developers ..... 1-12  
 allocateMemory, method..... 13-18  
 anytype portholes..... 2-11  
 application exited error message ..... 1-21

ArrayState class ..... 2-23  
 ArrivingPrecision parameter ..... 4-7  
 asComplex method  
     Message class ..... 4-18  
 asFloat method  
     Message class ..... 4-18  
 asInt method  
     Message class ..... 4-18  
 AsmPortHole, class ..... 13-12  
 attribute..... 2-9, 2-10, 2-21  
     A\_CIRC ..... **13-13**  
     A\_CONSEC ..... **13-13**  
     A\_CONSTANT ..... **13-13**  
     A\_GLOBAL..... **13-12**  
     A\_LOCAL ..... 13-12  
     A\_MEMORY..... **13-13**  
     A\_NOINIT ..... **13-13**  
     A\_NONCONSTANT..... **13-13**  
     A\_NONSETTABLE ..... **13-13**  
     A\_PRIVATE ..... **13-12**  
     A\_RAM..... **13-14**  
     A\_SETTABLE..... **13-13**, 13-13  
     A\_SHARED..... **13-12**  
     A\_UMEM ..... **16-1**  
     A\_XMEM ..... **15-1**, **16-1**  
     A\_YMEM ..... **15-1**  
     P\_BMEM ..... **16-1**  
     P\_CIRC ..... **13-14**  
     P\_NOINIT ..... **13-14**  
     P\_SHARED ..... **13-14**  
     P\_SYMMETRIC..... **13-14**  
     P\_UMEM ..... **16-1**  
     P\_XMEM ..... **15-1**  
     P\_YMEM..... **15-1**  
 attribute, A\_BMEM ..... **16-1**  
 attribute, A\_UMEM ..... **16-1**  
 attribute, A\_XMEM ..... **15-1**  
 attribute, A\_YMEM ..... **15-1**  
 Attributes ..... 13-12  
 author pflang directive..... 2-6, **2-8**

## B

bad format parameters  
     Fix class..... 4-4  
 BarGraph class ..... 3-4  
 baseAddr, method..... **13-12**  
 BaseImage class ..... 4-40  
 BDFPortHole class ..... 9-1, 14-6  
 before method..... 12-5, 12-7  
 begin method

DERepeatStar class .....	12-9
begin ptlang directive .....	2-6, <b>2-13</b>
Bhattacharyya, S. S. ....	13-21
Bhave, S. ....	14-1
binary point .....	4-4
Buck, J. T. 2-1, 3-1, 4-1, 7-1, 9-1, 13-1, 14-1, 15-1	
Buck, J.T. ....	14-1
bufPos, method .....	<b>13-12</b>
bufSize, method .....	<b>13-12</b>
<b>C</b>	
C++ Primer .....	2-17
callTcl_ \$starID .....	5-4, 5-5
canGetFired method .....	12-9, 12-9, 12-10
ccinclude ptlang directive .....	2-6, <b>2-15</b>
cerr .....	3-3
Cfront C++ compiler .....	1-2
CG, domain .....	13-1
CGPCM .....	13-9
CGPortHole class .....	14-6
CGCStar class .....	14-1
CGCTarget class .....	14-2
CGDDF Scheduler .....	13-22
CGMultiTarget, class .....	13-18, 13-19
CGPortHole class .....	14-3
CGSharedBus, class .....	13-19
CGStar, class .....	13-3
CGTarget .....	14-2
Chang, W.-T. ....	17-1
Chen, M. J. ....	4-1, 17-1
cin .....	3-3
circAccessThisTime, method .....	<b>13-12</b>
clearAttributes method .....	2-26
clog .....	3-3
clone method	
Message class .....	4-16, 4-18
Closing Application error message .....	1-21
code ptlang directive .....	2-6, <b>2-15</b>
code stream	
aioCmds .....	<b>15-2</b>
shellCmds .....	<b>15-2</b>
simulatorCmds .....	<b>15-2</b>
code streams .....	13-16
Codeblock .....	13-3
codeblock ptlang directive .....	2-6
codeGenInit, method .....	13-18
CodeStream, class .....	13-16
Collect CGC .....	<b>13-15</b>
collect star .....	13-24
Collect, star .....	13-15
colors .....	5-12
CommPair .....	13-27

communication networks .....	4-14, 12-1
compileCode, method .....	13-18
compile-time scheduling .....	2-13
Complex class .....	2-21, 2-22, <b>4-2-4-3</b>
- operator .....	4-2
!= operator .....	4-3
* operator .....	4-2
*= operator .....	4-2
+ operator .....	4-2
+= operator .....	4-2
/ operator .....	4-3
/= operator .....	4-2
-= operator .....	4-2
= operator .....	4-2
== operator .....	4-3
abs() function .....	4-3
arg() function .....	4-3
basic operators .....	4-2
conj() function .....	4-3
constructors .....	4-2
cos() function .....	4-3
exp() function .....	4-3
imag() function .....	4-2, 4-3
log() function .....	4-3
norm() function .....	4-3
pow() function .....	4-3
real() function .....	4-2, 4-3
sin() function .....	4-3
sqrt() function .....	4-3
Complex data type .....	<b>4-1-4-3</b>
complex data type .....	2-11
complex state .....	2-10
complex type	
portholes .....	2-11
states .....	2-9
COMPLEX_MATRIX_ENV .....	4-30
complex_matrix_env type	
portholes .....	2-11
complexarray type	
states .....	2-9
ComplexArrayState class .....	2-21
ComplexMatrix, see Matrix class	
ComplexParticle class .....	2-21
ComplexState class .....	2-21, 2-22
computer architecture modeling .....	12-1
conscalls ptlang directive .....	2-6, <b>2-13</b>
constructor ptlang directive .....	2-6, <b>2-12</b>
constructors .....	2-13
copy constructor	

- Message class ..... 4-16
- copyright ptlang directive ..... 2-6, **2-8**
- core dump ..... 1-21
- core dumped ..... 1-21
- core files ..... 1-21
- cout ..... 2-28, 3-3
- creating a new star ..... 2-1
- CUSTOM\_DIRS ..... 1-10
- D**
- data types ..... 2-11
  - user-defined ..... 4-14
- dataNew flag ..... 12-5, 12-12
- dataNew flag in DE ..... 12-4
- dataType method
  - Envelope class ..... 4-17
- DC Scheduler ..... 13-22
- DCTImage class ..... 4-41
- DDF star ..... **8-1**
- DDFStar class ..... **8-2**
- DE
  - writing stars ..... 12-1
- DE domain ..... 12-1
- debugging ..... 1-21, 1-23
- default parameter values ..... 2-10
- default value for states ..... 2-9
- delay
  - DE domain ..... 12-1
  - delay stars in DE domain ..... 12-1
  - for matrix arcs ..... 4-31
  - in dataflow ..... 4-31
  - in DE ..... 12-8
- Delay (DE block) ..... 12-1
- DEPortHole class ..... 12-5
- DERepeatStar class ..... 12-9
- derived ptlang directive ..... 2-6
- derivedfrom ptlang directive ..... 2-6, **2-7**
- desc ptlang directive ..... 2-6
- descriptor ..... 2-10
- descriptor ptlang directive ..... 2-6, **2-7**
- DEStar class ..... 12-9
- destructor ptlang directive ..... 2-6, **2-13**
- determinism ..... 12-12
- discrete event (DE) domain ..... 12-1
- divide by zero
  - Fix class ..... 4-4
- DL Scheduler ..... 13-22
- domain
  - SDF ..... **7-1**
- domain ptlang directive ..... **2-5**, 2-6
- DownCounter (DDF star) ..... 8-2
- dummy message ..... 4-17, 4-18, 4-31
- duplicate directory tree ..... 1-12
- dynamic linking ..... 2-1, 3-1
  - permanent ..... 2-3
- dynamic porthole ..... **8-1**
- DynDFStar class ..... **8-2**
- E**
- edit-params command ..... 2-21, 2-26
- Edwards, S. .... 11-1
- emacs ..... 1-26
- empty method
  - Envelope class ..... 4-17
- Envelope class ..... 4-14, 4-17
- environment variables
  - PT\_DEBUG ..... 1-26
  - PTARCH ..... 1-2
  - PTOLEMY ..... 1-2
- Error class ..... 3-1
- Evans, B. .... 4-1, 10-1
- event ..... 12-1
- event generator ..... 12-9
- exectime ptlang directive ..... 2-6
- execTime, method ..... 13-2
- exp alias ..... 1-12
- expandPathName ..... 3-3
- expandPathName function ..... 3-8
- explanation ptlang directive ..... 2-6, **2-9**
- exponentially distributed random number ..... 3-17
- external programs
  - invoking ..... 3-8
- F**
- FFTCx (SDF block) ..... 7-1
- file input to states ..... 2-23
- file, target parameter ..... 13-21
- first-in, first-out (FIFO) queue ..... 3-11
- Fix class ..... 4-3, ?? **4-14**
  - operator ..... 4-12
  - \* operator ..... 4-12
  - \*= operator ..... 4-12
  - + operator ..... 4-12
  - += operator ..... 4-12
  - / operator ..... 4-12
  - /= operator ..... 4-12
  - = operator ..... 4-12
  - = operator ..... 4-12
  - clear\_errors() ..... 4-12
  - compare() ..... 4-11
  - complement() ..... 4-13
  - constructors ..... 4-9
  - conversion operators ..... 4-13

dbz()	4-12
intb()	4-10
invalid()	4-11
is_zero()	4-11
len()	4-10
max()	4-11
maximum length	4-4
min()	4-11
overflow()	4-10
ovf_occurred	4-11
precision()	4-10
roundMode()	4-11
set_overflow	4-11
set_rounding	4-11
setToZero()	4-11
signBit()	4-11
uninitialized	4-6
value()	4-11
fix type	
portholes	2-11
states	2-9
FIX_MATRIX_ENV	4-30
fix_matrix_env type	
portholes	2-12
FIX_MAX_LENGTH	<b>4-4</b>
Fixed-point	
inputs and outputs	4-5
fixed-point	4-3
array parameters	4-4
parameters	4-4
precision	2-10
setting precision	2-10
states	4-4
Fixed-point data type	??- <b>4-14</b>
FixMatrix, see Matrix class	
FixParticle class	2-21
float type	
portholes	2-11
states	2-9
FLOAT_MATRIX_ENV	4-30
float_matrix_env type	
portholes	2-11
floatarray type	
states	2-9
FloatArrayState class	2-21, 2-23
FloatMatrix, see Matrix class	
FloatParticle class	2-21
FloatState class	2-21
Fork	
code generation	<b>13-14</b>
Fork (SDF block)	2-20
frameCode, method	13-18
fread of long failed	1-21
Free Software Foundation	1-1
functional star in DE	12-1
<b>G</b>	
g++	2-22
g++ compiler	1-1
Gain (SDF block)	2-27
gdb	1-22, 1-26
generateCode, method	13-18
generic pointer technique	3-11
get method	12-5, 12-6, 12-12
getMessage method	
MessageParticle class	4-18
getSimulEvent method	12-5, 12-11
globalDecls (CGCTarget method)	14-2
Gnu tools	1-22
go method	2-3
go ptlang directive	2-6, <b>2-14</b>
grabInputs_\$starID	5-4, 5-5
GrayImage class	4-41
<b>H</b>	
Ha, S.	2-1, 3-1, 7-1, 8-1, 12-1, 13-1, 14-1
hash table	3-8
hash tables	3-13
HashEntry class	3-13
hashing function	3-13
hashstring function	3-8
HashTable class	3-13, 3-15
HashTableIter class	3-13
Haskell, P.	4-1, 4-40
header ptlang directive	2-6, <b>2-15</b>
heterogeneous message interface	4-14
HIER Scheduler	13-22
hinclude ptlang directive	2-6, <b>2-15</b>
Histogram class	3-5
hppa.cfront	1-2
htmldoc ptlang directive	2-6
HU Scheduler	13-22
Hylands, C.	1-1, 11-1, 17-1
<b>I</b>	
I/O	3-2, 3-3
ifstream class	3-2, 3-3
image processing	4-40
include (CGCTarget)	14-1
include files	3-1
InDEPort class	12-5
InfString class	3-9
initCode (CGCStar method)	14-7
initCode, method	13-2

- initial value for states.....2-25
- initialized Fix objects .....4-6
- initializing states from files .....2-23
- inline method ptlang directive .....2-11
- inline virtual method ptlang directive.....2-11
- inmulti ptang directive.....2-19
- inmulti ptlang directive..... 2-6, 2-11, **2-11**
- inout ptlang directive ..... 2-6, 2-11, **2-11**
- inoutmulti ptlang directive ..... 2-6, 2-11, **2-11**
- input.....3-2, 3-3
- input ptlang directive.....2-6, 2-11, **2-11**, 2-17
- InSDFPort class .....2-17, 2-19
- installColors.....4-41
- int type
  - portholes .....2-11
  - states .....2-9
- INT\_MATRIX\_ENV .....4-30
- int\_matrix\_env type
  - portholes .....2-11
- intarray type
  - states .....2-9
- IntArrayState class.....2-21
- IntMatrix, see Matrix class
- IntParticle class.....2-21
- IntState class .....2-21
- isA method
  - Message class .....4-16
- ISA\_FUNC macro .....4-16
- ISA\_INLINE macro .....4-16
- iterator classes .....3-10
- iterators .....3-10, 3-13
- K**
- Kalavade, A. ....4-1
- key method
  - HashEntry class .....3-13
- Khazeni, A. ....4-1
- L**
- label
  - codeblockSymbol ..... 13-10
- Lane, T.....4-1
- last-in, first-out (LIFO) queue .....3-11
- LastOfN (DDF block).....8-1
- Lee, E. A.1-1, 2-1, 3-1, 4-1, 7-1, 12-1, 13-1, 14-1
- libraries of stars .....2-1
- Lim, Y. K.....14-1
- Lippman, S. ....2-17
- ListIter class.....3-11
- loadCode, method..... 13-18
- load-star command .....2-3
- load-star-perm command.....2-3
- location ptlang directive .....2-6, **2-8**
- look-inside command .....2-1
- loop schedulers ..... **13-21**
- loopingLevel, target parameter ..... 13-21
- M**
- macro
  - \$addr(name,offset) ..... **13-11**
  - \$ref (assembly)..... 13-12
  - label ..... 13-10
  - ref ..... 13-8
  - sharedSymbol..... 13-9
  - starName ..... 13-8
- macro, \$\$ ..... 13-12
- macro, codeblockSymbol ..... 13-10
- macros, CG stars ..... 13-8
- mainDecls (CGCTarget member) ..... 14-1
- mainLoopCode, method ..... 13-18
- make ..... 1-4, 2-1
- make.template ..... 1-7
- makefiles ..... 1-4
- make-star command ..... 2-1
- Matrix class ..... **4-21-4-33**
  - operator .....4-28
  - operator, unary negation operator .....4-27
  - ! operator, inverse operator .....4-27
  - != operator .....4-25
  - \* operator .....4-28
  - \*= operator .....4-26
  - + operator .....4-28
  - += operator .....4-26
  - /= operator .....4-26
  - operator .....4-26
  - = operator, assignment operator .....4-25
  - == operator .....4-25
  - ^ operator .....4-27
  - ~ operator, transpose operator.....4-27
- clone() function .....4-29
- ComplexMatrix .....4-22
- conjugate() function for ComplexMatrix .....4-27
- constructors .....4-23
- conversion operators .....4-25
- dataType() function .....4-29
- entry() function ..... 4-22, 4-38
- FixMatrix .....4-22
- FixMatrix, special constructors ..... 4-24, 4-25
- FloatMatrix.....4-22
- hermitian() function for ComplexMatrix .....4-27
- including Matrix.h into a Star .....4-30
- identity() function .....4-27

- IntMatrix ..... 4-22
- inverse() function ..... 4-27
- isA() function ..... 4-29
- Lapack++ ..... 4-33
- MatrixEnvParticle ..... 4-22
- multiply() function ..... 4-29
- outputting to a PortHole ..... 4-31
- print() function ..... 4-29
- star input and output ..... 4-30
- transpose() function ..... 4-27
- writing Stars that use the Matrix class ..... 4-29
- Matrix.h include file ..... 4-30
- Message class ..... 4-14, 4-40
- message data type ..... 2-11
- message programming example ..... 4-18
- message type
  - portholes ..... 2-11
- MessageParticle class ..... 2-21, 4-15, 4-18
- method ptlang directive ..... 2-6, 2-11, **2-15**
- mkl alias ..... 1-12
- mkPtolemyTree ..... **1-9**
- MultiInSDFPort class ..... 2-19
- MultiOutSDFPort class ..... 2-19
- multiple portholes ..... 2-19
- multiple-processor schedulers ..... 13-21
- MultiPortHole class ..... 2-19
- multiprocessor target ..... 13-18
- MultiTarget, class ..... 13-18
- Murthy, P. K. .... 13-1, 13-21
- MVImage class ..... 4-41
- myData method
  - Envelope class ..... 4-17
- N**
- name ptlang directive ..... **2-5**, 2-6
- NegativeExpntl class ..... 3-17
- non-determinism ..... 12-12
- non-deterministic loop ..... 12-8
- num ptlang directive ..... **8-2**
- numberPorts method ..... 2-21
- numSimulEvents method ..... 12-5
- numTokens ptlang directive ..... 7-2
- numtokens ptlang directive ..... 2-11, **2-12**
- O**
- obj.\$PTARCH directories ..... 1-4
- objdir alias ..... 1-2
- Octools ..... **1-5**
- ofstream class ..... 3-2, 3-3
- operator, referencing an entry ..... 4-23, 4-38
- OutDEPort class ..... 12-5
- outmulti ptlang directive ..... 2-6, 2-11, **2-11**, 2-19
- output ..... 3-2, 3-3
- output ptlang directive ..... 2-6, 2-11, **2-11**, 2-19
- OutSDFPort class ..... 2-17, 2-19
- overflow
  - Fix class ..... 4-4
- override.mk ..... 1-7, **1-9**, 1-11
- P**
- parallel directory tree
  - mkPtolemyTree ..... 1-9
- parallel schedulers ..... 13-21
- parallel software development tree
  - csh aliases ..... 1-12
- parameter ..... 2-9
- parameters
  - complex ..... 2-10
- Parks, T. M. .... 1-1, 10-1, 12-1, 13-1, 14-1, 17-1
- Particle class ..... 2-17, 2-21, 4-15
- particle types ..... 2-21
- pathSearch function ..... 3-8
- phase mode in DE ..... 12-12
- PHASE, de ..... 12-12
- phase-based firing mode in DE ..... 12-12
- pigi ..... 3-4
- pigiExample directory ..... 1-7
- pigiRpc ..... **1-5**, 1-21
- pigiRpc, custom version ..... 1-6
- pigiRpc.debug ..... 1-23
- Pino, J. L. .... 1-1, 6-1, 13-1, 14-1, 15-1
- plotting data ..... 3-3
- Pointer type ..... 3-11
- Poisson (DE block) ..... 3-17, 12-9
- Poisson process ..... 12-9
- polymorphism ..... 2-28
- PortHole class ..... 2-17
- porthole SDF parameters ..... 7-1
- porthole, dynamic ..... **8-1**
- ports, hiding from the user ..... 2-26
- pragma ..... 2-21, 14-4
- precision parameter ..... 4-4
- precision state ..... 2-10
- precision type
  - states ..... 2-9
- preprocessor ..... **2-1**
- print method ..... 2-21
  - Message class ..... 4-16, 4-31
- Printer (SDF block) ..... 2-28
- private ptlang directive ..... 2-6, **2-14**
- processMacro, method ..... 13-12
- profile command ..... 2-7
- progNotFound function ..... 3-8
- protected ptlang directive ..... 2-6, **2-14**
- pt alias ..... 1-12
- PT\_DEBUG environment variable ..... 1-26

- pt\_ifstream class .....3-2, 3-3
- pt\_ofstream class .....3-2, 3-3
- PTARCH environment variable ..... 1-2
- ptbin.mk ..... **1-6**
- ptcl ..... *1-1*, **1-5**, 2-24, 3-4
- ptkControlPanel .....5-2, 5-6
- ptl alias .....1-12
- ptlang .....2-3
- PTOLEMY environment variable ..... 1-2
- ptolemy user ..... 1-2
- public ptlang directive ..... 2-6, **2-14**
- pure method ptlang directive .....2-11
- Pure Software Inc. ....1-19
- pure virtual method ptlang directive .....2-11
- Purecov .....1-19
- pure-delay star in DE .....12-2
- Purify .....1-19
- put method ..... 12-5, 12-6
- pxgraph program .....3-3, 3-6
- Q**
- Quantify .....1-19
- quantization
  - Fix class ..... 4-4
- Queue class .....3-11
- queueing .....12-1
- queueing networks .....12-1
- R**
- Ramp (SDF block) .....2-26
- random numbers .....3-17
- receive star ..... *13-23*
- receiveData method ..... 8-2
- Rect (SDF block) .....2-4
- reference count ..... 4-14, 4-17, 4-30
- refireAtTime method ..... *12-9*, 12-9
- rml alias .....1-12
- rounding
  - Fix class ..... 4-4
- RPC Error .....1-21
- runCode, method ..... *13-18*
- S**
- saturation
  - Fix class ..... 4-4
- savestring function .....3-8
- sccs .....1-18
- schedulers
  - static ..... **7-1**
- schedulers, CG domain ..... *13-20*
- SDF
  - domain ..... **7-1**
  - porthole parameters ..... 7-1
  - writing stars ..... **7-1, 12-1**
- SDF (synchronous dataflow) ..... **7-1**
- SDFFix class .....4-9
- seed of a random number .....3-17
- segmentation fault .....1-21
- self-scheduling star .....12-8
- send star ..... *13-23*
- Send/Receive stars ..... **13-23**
- send/receive stars ..... *13-23*
- sendData method ..... 8-2, 12-5
- sequencing directives in DE .....12-6
- SequentialList ..... *3-15*
- SequentialList class .....3-11
- Server (DE block) .....12-1
- server stars in DE .....12-3
- setAttibutes method .....2-26
- setAttributes method .....2-26
- setBDFParams (BDFPortHole method) .....14-6
- setBDFParams method
  - BDFPortHole class ..... 9-1
  - setInitValue method .....2-26
  - setOutputs\_ \$starID ..... 5-4, 5-5
  - setSDFParams method .....2-12, 2-19, **7-1**
  - setstate command .....2-21
  - setup method ..... 7-1
  - setup ptlang directive ..... 2-6, **2-13**
- shared data structures .....3-14
- sign bit .....4-4
- signal generators in DE .....12-8
- simple mode in DE .....12-11
- SIMPLE, de .....12-11
- simultaneous events (DE domain) .....12-6
- sol2.cfront ..... 1-2
- source code ..... 1-1
- source code control .....1-18
- source stars in DE .....12-8
- Spread CGC ..... **13-15**
- spread star ..... *13-24*
- Spread, star ..... *13-15*
- spread/collect stars ..... *13-24*
- srcdir alias ..... 1-2
- Sriram, S. ....15-1
- stack .....1-22
- Stack class .....3-11
- star, defining a new star ..... 2-1
- stars.mk ..... **1-6**, 1-10
- state .....2-9
- state ptlang directive ..... 2-6, **2-9**, 2-11, 2-21
- states
  - hiding from the user .....2-26
- static buffering ..... *13-16*
- static members .....3-15
- static methods ..... 3-1
- static scheduling

SDF .....	<b>7-1</b>	types.....	2-11
statistics, histogram .....	3-5	tysh .....	<b>1-5</b>
stderr.....	3-3	<b>U</b>	
stdin .....	3-3	underflow	
stdout.....	3-3	Fix class.....	4-4
string states.....	2-9	Uniform class.....	3-18
stringarray states .....	2-9	uniformly distributed random number.....	3-18
StringArrayState class.....	2-21	uninitialized Fix object.....	4-6
StringList class.....	3-9	user-defined messages.....	4-15
StringListIter class .....	3-10	<b>V</b>	
strings.....	3-9	value method	
StringState class .....	2-21	HashEntry class.....	3-13
sub-galaxy .....	13-23	vector message.....	4-15
substChar, method.....	13-12	vem .....	1-1
sub-universe .....	13-23	version ptlang directive .....	2-6, <b>2-7</b>
sw alias .....	1-12	video processing .....	4-40
Switch (CGC Block).....	14-3	virtual method ptlang directive.....	2-11
Switch (CGC block).....	14-6	<b>W</b>	
symbolic links .....	1-12	waitFor method	
synchronous dataflow .....	<b>7-1</b>	DDFStar class.....	<b>8-2</b>
<b>T</b>		White, K. ....	13-1, 14-1, 15-1
target, code generation .....	13-16	Williamson, M. ....	17-1
target, multiprocessor.....	13-18	wrapup (Star method).....	14-2
targets .....	1-1	wrapup method .....	3-15
Tcl/Tk.....	1-1	wrapup ptlang directive .....	2-6, <b>2-14</b>
TclScript (DE block).....	5-12	writableCopy method	
TclScript star .....	5-1	Envelope class .....	4-17
TclStarIfc class.....	5-12	writeCode, method .....	13-18
tempFileName function.....	3-8	<b>X</b>	
TextTable class .....	3-13	X window system .....	3-3
TextTableIter class.....	3-13	XGraph class .....	3-3
time stamp .....	12-1	XHistogram class.....	3-5
Tk .....	3-4	<b>Y</b>	
tkMain.c .....	14-7	yacc.....	2-4
tkSetup CGCTclTkTarget .....	14-7		
TkShowValues .....	5-2		
triggers method .....	12-5		
troff.....	2-4		
truncation			
Fix class .....	4-4		
two's complement.....	4-4		
Tycho Target .....	14-8		
tylndir script .....	1-11		
type conversion .....	2-21		
Message class.....	4-16		
type, C50 state.....	16-1		
type, CG56/CG96 state .....	15-1		
TYPE_CHECK macro .....	4-17		
typeCheck method			
Envelope class.....	4-17		
typeError method			
Envelope class.....	4-17		