

Proposal Discussions Ver .2

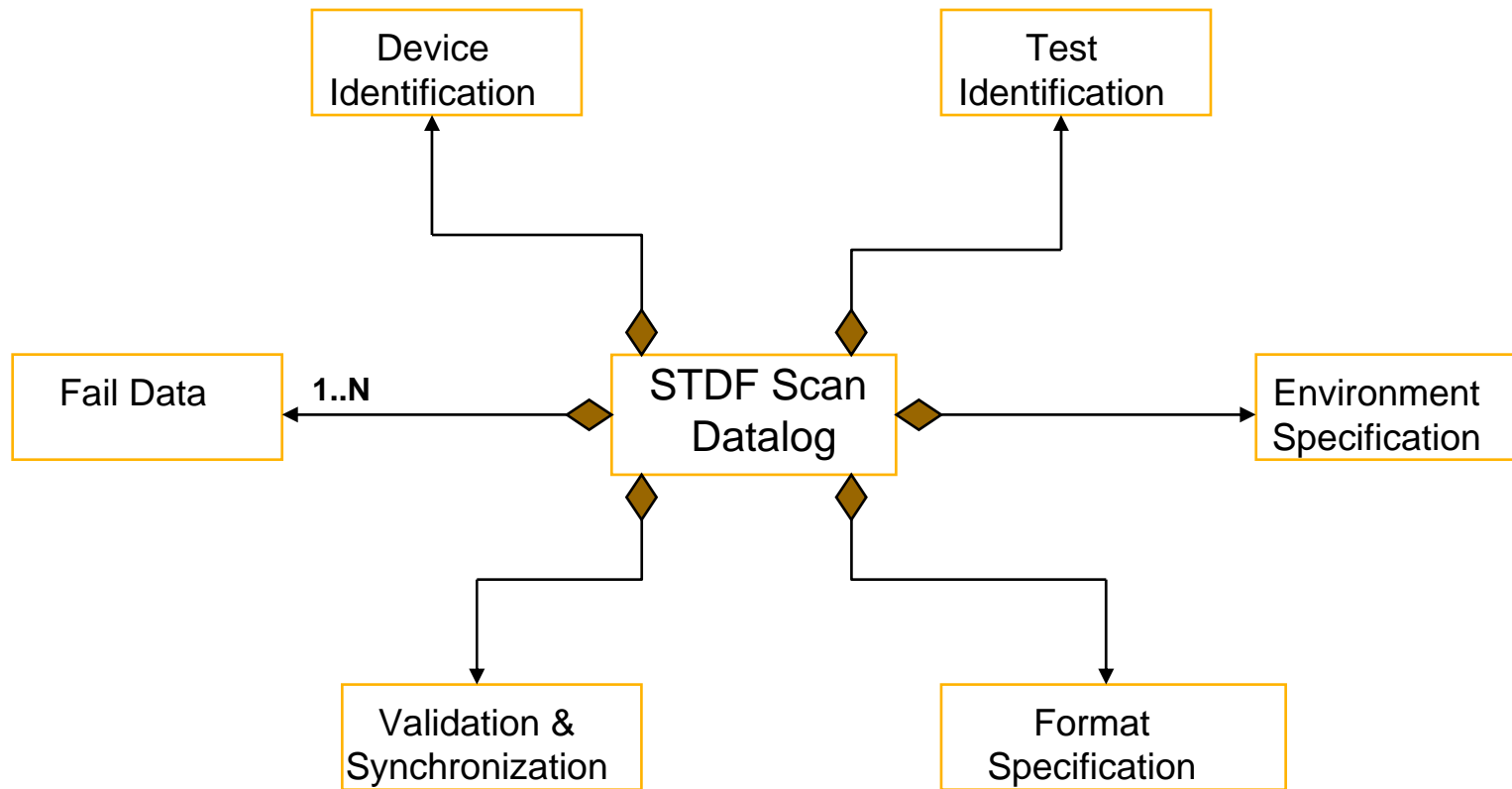
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Apr, 2007



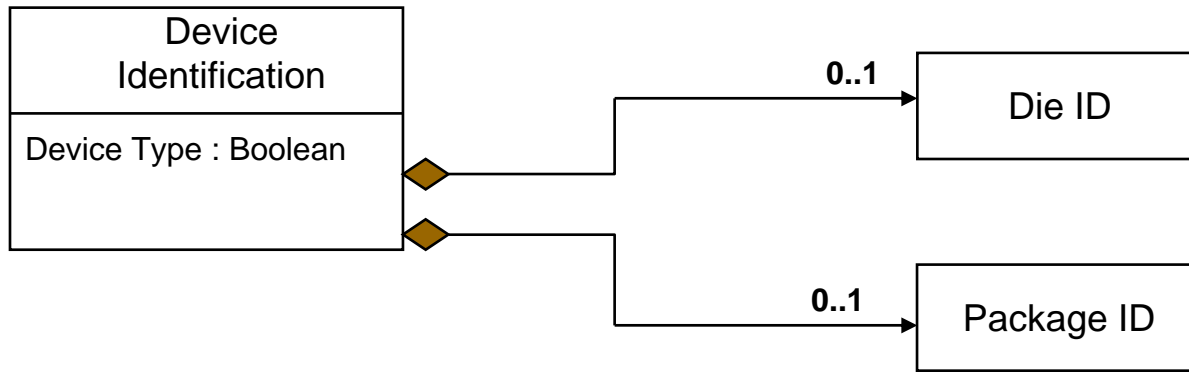
Point Covered so far

- Format should allow capture of millions of failures (what one would expect in 2010)
- Storing Environment information in the diagnosis records
 - + allow storing diagnosis data in their own IT database
 - Duplication of data
 - consistency of keeping the replicated data consistent

Scan Datalog Data Model



Device Identification

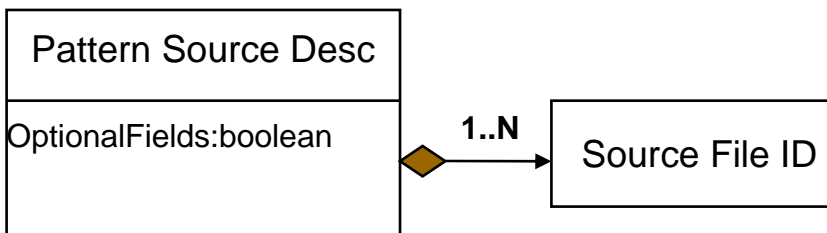
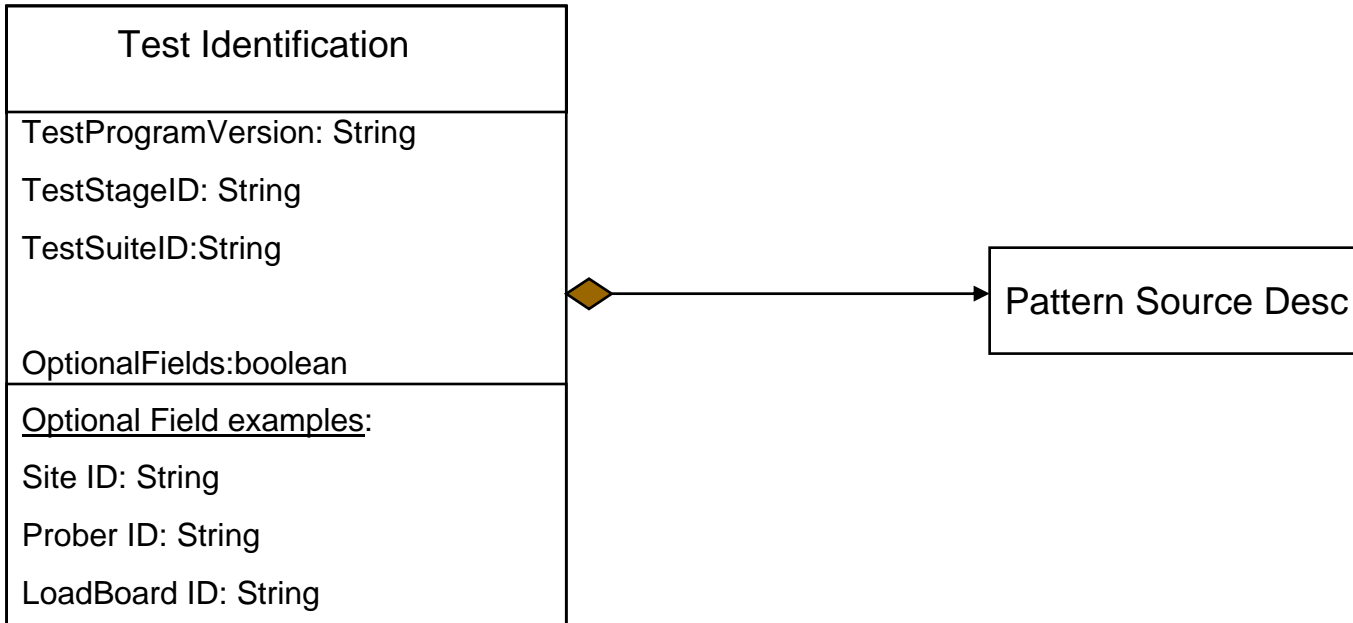


Die ID
WaferID : Long
LotID : Long
XCoord: Integer
YCoord: Integer
PartNumber: string
ElectronicID:string
OptionalField: Boolean

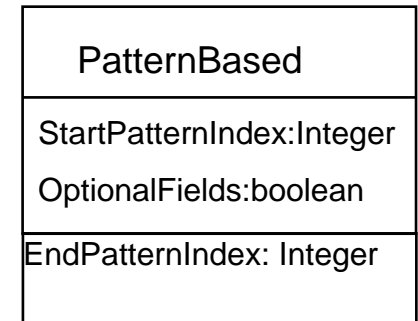
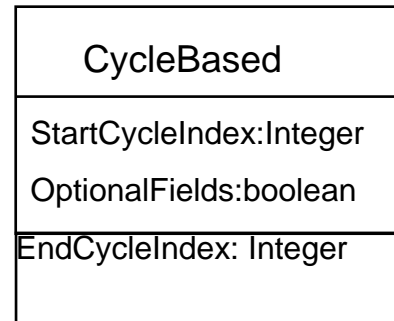
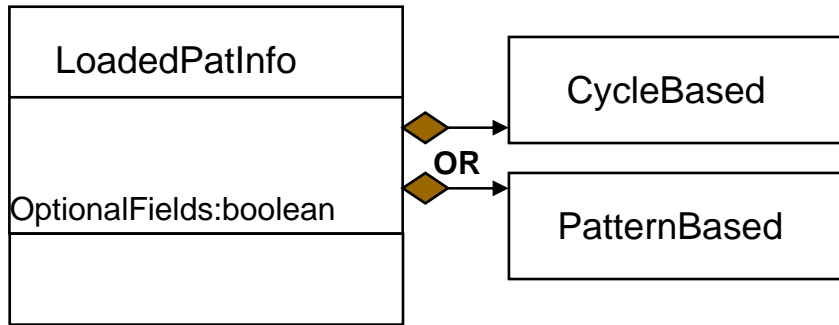
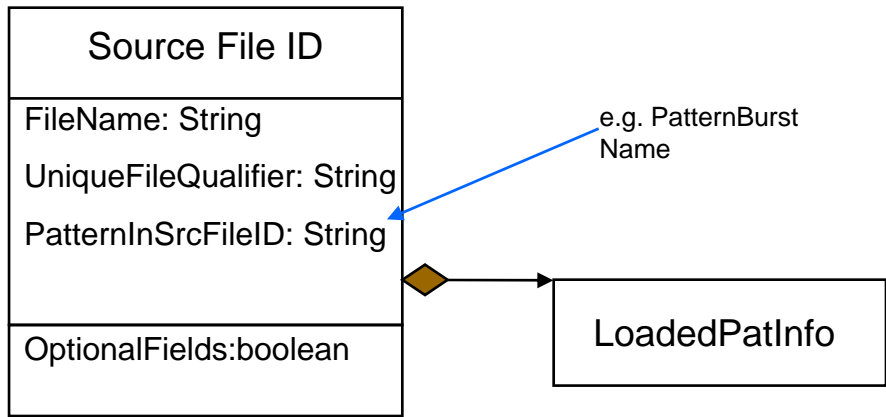
Package ID
SrNo : String
DielD: Integer
ElectronicID:string
OptionalField: Boolean

NOTE: Each Die in SiP will have a separate record

Test Identification



Test ID continued



Environment Identification

Environment Identification
ScanFreq: long
CaptureFreq: String
TestTemp : Integer
NominalVoltage: string
StressVoltage: string
OptionalFields:boolean

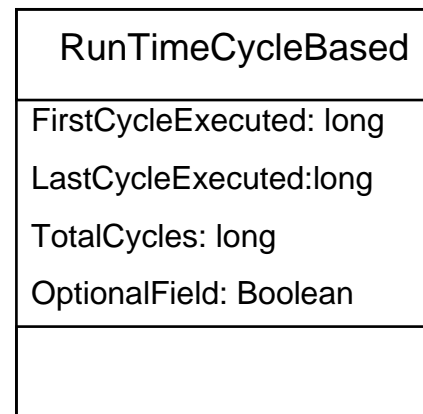
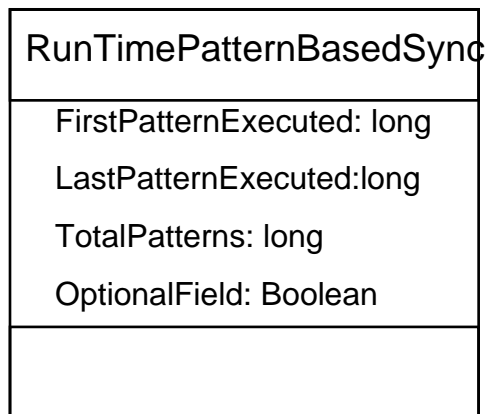
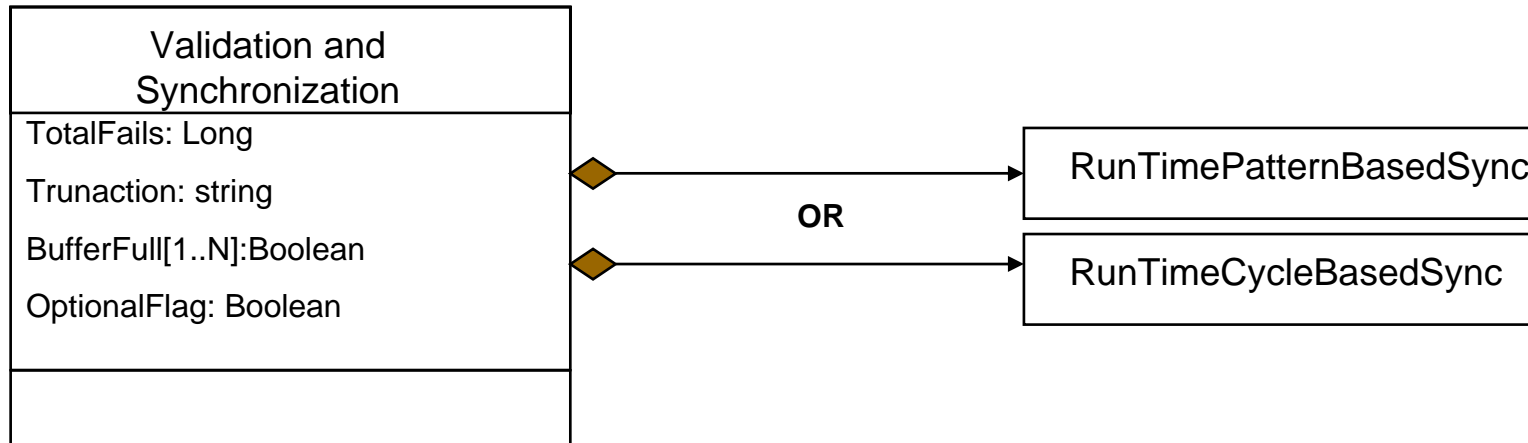
- ScanFrequency: Shift Frequency
- Capture Frequency: Functional speed
- TestTemp:
- Test Nominal Voltage
- Test Stress Voltage: To be used if any voltage stress in terms of bump or low voltage is applied
- User specific environment specification

Format Specification

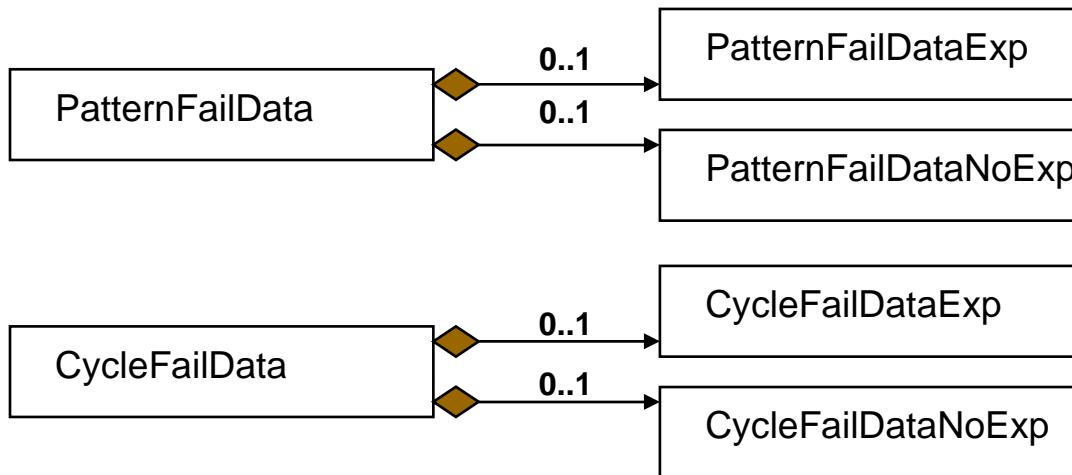
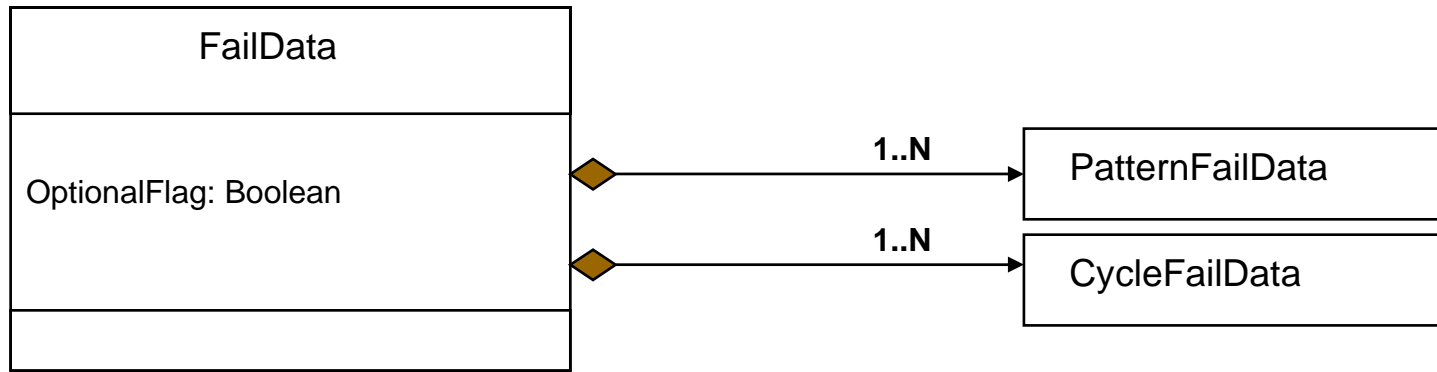
Format Specification
FailDataFormat: Boolean
ExpectedDataAvailable: Boolean
ZHandlingFlag: Char
OptionalField: Boolean

- Fail data format: ATPG (pattern based) vs. ATE (Cycle Based)
- Expected Data flag: (No expected data | with expected data)
- Z Handling flag: This is used to indicate how the Z states are handled and represented in the data log
- User specific

Validation & Synchronization



Fail Data



Fail Data

PatternFailDataExp
PatterNum: long
OffSet: long
PinNum: Interger
MeasuredData: Char
ExpectedData: Char
OptionalField: Boolean

CycleFailDataExp
CycleNum: long
PinNum: Integer
MeasuredData: Char
Expected Data: Char
OptionalField: Boolean

PatternFailDataNoExp
PatterNum: long
OffSet: long
PinNum: Interger
MeasuredData: Char
OptionalField: Boolean

CycleFailDataNoExp
CycleNum: long
PinNum: Integer
MeasuredData: Char
OptionalField: Boolean

END

Validation & Synchronization

Validation and Synchronization
F: Boolean
ExpectedDataAvailable: Boolean
ZHandlingFlag: Char
BufferFull[1..N]: Boolean
OptionalField: Boolean

- First Pattern executed (Required only if fail data format is ATPG and first pattern is other than 0)
- Last Pattern executed (Required only if fail data format is ATPG and the last executed pattern is other than the last pattern in the memory)
- First cycle executed (Required only if fail data format is ATE)
- Last cycle executed (Required only if fail data format is ATE and the last executed cycle is other than the last cycle with entire pattern set)
- Total number of fails
- Total patterns (required only if the fail data format is ATPG.)
- Total cycles (required only if the fail data format is ATE.)
- Pattern 0 fail indication: This is set if there is any fail on any pin in pattern 0
- Buffer full identification: This information will identify for each pin whether there was a buffer overrun.

PatternBased
FirstPatternExecuted: long
LastPatternExecuted:long
TotalPatterns: long
OptionalField: Boolean

CycleBased
FirstCycleExecuted: long
LastCycleExecuted:long
TotalCycles: long
OptionalField: Boolean

- O External communication/press release
- O Archiving decisions and proposal document format
- O Continue discussions on requirements