Blocks (Advanced)

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This document provides an advanced discussion related to the notion of Blocks. This example helps solidify the notion of a Block and helps you see how Blocks are used within the Reporting Checklist and the Disclosure Mechanics validation checks.

STEP 1: Start Pesseract, Open XBRL instance.

Open the Pesseract application and the main form is displayed and the "Home" tab of the menu ribbon is displayed. Press the "Open" icon and then "Open XBRL instance". Press the browse button (with the three dots) and open the file:

\DynamicRules\basic-SampleInstance-EmbededModelStructureReportingChecklistDisclosureMechanics.xml

(Alternatively, use the example from the Get Started icon if you don't have these files):



As the document is loading you will be notified that the following dynamic rules are being loaded:



If you have loaded this document before you will see a green "Yes" under the heading "Available in Cache". If the rules are not available, then "Preload/Reload" the rules. Otherwise, simply click "OK" to complete loading the XBRL instance.

Once the document is loaded your application should look similar to the screen shot below. Notice the "Report Validation Status". The XBRL Syntax has been validated as the document was loaded and no issues were found and so that icon was turned GREEN. The other icons are GRAY indicating that validation has not yet been performed.

In the lower left side of the "Report Validation Status" menu group there is an icon. Click that icon and the "Run Selected Validations" form is opened. Leave all the options as they are set and press the "Run" button.

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i i i i i i i i i i i i i i i i i i i	XBRL-based general								
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	quipment 🔶 Implied [Table]	Receivables			2,000	3,	000		
	[mplied [Table]	Inventories			1,000	1,	000		
😥 1260 - Disclosure - Long-term Debt 🔶 Im	plied [Table]	Current Assets			7,000	000			
	Implied [Table]	Noncurrent Assets [Roll Up]							
	[mplied [Table]	Property, Plant and Equipment			6,000	000			
3101 - Disclosure - Finished Goods Detail	Implied [Table]		INOI	Assets	5,000	1,	000		
		Liabilities and Equi	ty [Roll Up]		13,000				
		Liabilities [Roll Up]							
		Current Liabilities [Roll Up]						
		Accounts Payable			1,000	1,	000		
		Noncurrent Liabiliti	Cu ies [Roll Lin]	rrent Liabilities	1,000	1,	000		
		Long-term Debt	ca [ron ob]		6.000	1	000		
			Noncu	rrent Liabilities	6,000	1,	000		
Component Properties	10 - Statement - Balance Sheet			Liabilities	7,000	2,	000		
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Disclosure	closures:BalanceSheet	Retained Earnings		Facility	6,000	4,	000		
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Message List Console									
Loading was successful: no errors or warnings.									

After the validation has been completed (this should take a matter of seconds) the icons all turn GREEN:



This indicates that no inconsistencies were discovered in the document. In addition to the icons turning GREEN, several new documents become visible in the application.

STEP 2: *Reporting checklist validation.*

Click on the new window named "Reporting Checklist Validation Result":

#		Disclosure	Checklist Category	Reason Disclosure Must Exist	Discovered	Expectation Met	Link to Disclosure Mechanics
~ O		Reporting Checklist					
~	1	Balance Sheet	Required disclosure	Disclosure always required, satisfied by Assets [Roll Up] and Liabilities and Equity [Roll Up] disclosures	True	CONSISTENT	Balance Sheet
	2	Assets [Roll Up]	Part of disclosure	Satisfies Balance Sheet disclosure	True	CONSISTENT	Assets [Roll Up]
	3	Liabilities and Equity [Roll Up]	Part of disclosure	Satisfies Balance Sheet disclosure	True	CONSISTENT	Liabilities and Equity [Roll Up]
	4	Income Statement	Required disclosure	Disdosure always required	True	CONSISTENT	Income Statement
	5	Cash Flow Statement, Direct Method	Required disclosure	Disclosure always required	True	CONSISTENT	Cash Flow Statement, Direct Method
	6	Receivables [Roll Forward]	Line item exists, then disclosure required	Required because line item basic:Receivables was reported	True	CONSISTENT	Receivables [Roll Forward]
	7	Cash and Cash Equivalents [Roll Forward]	Line item exists, then disclosure required	Required because line item basic:CashAndCashEquivalents was reported	True	CONSISTENT	Cash and Cash Equivalents [Roll Forward]
	8	Inventories [Roll Forward]	Line item exists, then disclosure required	Required because line item basic:Inventories was reported	True	CONSISTENT	Inventories [Roll Forward]
	9	Accounts Payable [Roll Forward]	Line item exists, then disclosure required	Required because line item basic: AccountsPayable was reported	True	CONSISTENT	Accounts Payable [Roll Forward]
	10	Property, Plant, and Equipment Roll Forward	Line item exists, then disclosure required	Required because line item basic:PropertyPlantAndEquipment was reported	True	CONSISTENT	Property, Plant, and Equipment Roll Forward
	11	Long-Term Debt [Roll Forward]	Line item exists, then disclosure required	Required because line item basic:LongtermDebt was reported	True	CONSISTENT	Long-Term Debt [Roll Forward]
	12	Retained Earnings [Roll Forward]	Line item exists, then disclosure required	Required because line item basic:RetainedEarnings was reported	True	CONSISTENT	Retained Earnings [Roll Forward]

Notice that all the items in the reporting checklist have the value for "Discovered" which is "True". Further, the "Expectation Met" is "CONSISTENT" for every item in the reporting checklist.

Click on the "Reporting Checklist Taxonomy". This is where the reporting checklist rules are specified. You will have to rearrange your view a little to make it look like the screenshot below:

Taxonomy View				
Relations Formula				
Settings				
View Type: Definition	Language:	English 💌	View Type:	Definition
-	Arcrole		Order	Name
V D Definition View				
 Reporting Checklist 				
🗸 💽 [Thing]			0	cm:Thing
🗸 💽 [FinancialReport]	http://xbrlsite.azurewebsites.net/2016/conceptual	-model/arcrole/class-equivalentClass	1	cm:FinancialReport
Balance Sheet	http://xbrlsite.azurewebsites.net/2016/conceptual	-model/drules-arcroles/arcrole <mark>/financialReport-requiresDisclosure</mark>	2	disclosures:BalanceSheet
Income Statement	http://xbrlsite.azurewebsites.net/2016/conceptual	-model/drules-arcroles/arcrole/financialReport-requiresDisclosure	3	disclosures:IncomeStatement
Cash Flow Statement, Direct Method	http://xbrlsite.azurewebsites.net/2016/conceptual	-model/drules-arcroles/arcrole/financialReport-requiresDisclosure	4	disclosures:CashFlowStatementDirectMethod
Receivables	http://xbrlsite.azurewebsites.net/2016/conceptual	-model/drules-arcroles/arcrole/financialReport-reportsConcept	5	basic:Receivables
🕞 Receivables [Roll Forward]	http://xbrlsite.azurewebsites.net/2016/conceptual	-model/drules-arcroles/arcrole <mark>/financialReport-requiresDisclosure</mark>	8	disclosures:ReceivablesRollForward
 Cash and Cash Equivalents 	http://xbrlsite.azurewebsites.net/2016/conceptual	-model/drules-arcroles/arcrole/financialReport-reportsConcept	6	basic:CashAndCashEquivalents
🚯 Cash and Cash Equivalents [Roll Forw	http://xbrlsite.azurewebsites.net/2016/conceptual	-model/drules-arcroles/arcrole/reportingLineItem-requiresDisclosure	7	disclosures:CashCashEquivalentsRollForward
v 🕕 Inventories	http://xbrlsite.azurewebsites.net/2016/conceptual	-model/drules-arcroles/arcrole/financialReport-reportsConcept	9	basic:Inventories
Inventores [Roll Deward]	http://wdsite.az/wwebsite.net/2019/conceptu	model/deles-arcrans(arcroleneporting) eItem-renuiresDisensure		durasures: Thentory For Forward

The rules specified in the reporting checklist taxonomy are used to check the report to make sure the report is consistent with the expectations established in the rules. The information is easier to read in the "Reporting Checklist Validation Result" than in the "Reporting Checklist Taxonomy". There are two types of checks I want to point out. First, required disclosures; notice that the rules say that the balance sheet, income statement, and cash flow statement are required. Second, if a line item is reported then a

disclosure is required; so for example if the line item "Receivables" is reported, then the disclosure "Receivables [Roll Forward]" is required.

Go to the document "Instance" in the application. Then select the "Blocks" view. You see a list of Blocks that exist in the report:



If you click on a block you can see that the Disclosure property is set to a disclosure from the reporting checklist in most cases:



If you map the Blocks in the report to the reporting checklist you can see that the report has all the disclosures the reporting checklist is looking for:

Blocks (14)							
C. Naturdi View C. Component View C. Block View							
Composed view							
Filter Type 👻 Filter Level 💌 Filter Status 💌							
			ef. 15 - e -				had a second sec
Enter text to filter	#	Disclosure	Cheddist Category	Reason Disclosure Must Exist	Discovered	Expectation met	Link to Disclosure Mechanics
	✓ 0	Reporting Checklist					
Assets [Roll Up]	v 1	Balance Sheet	Required disclosure	Disclosure always required, satisfied by Assets [Roll Up] and Liabilities and Equity [Roll Up] disclosures	True	CONSISTENT	Balance Sheet
Liabilities and Equity [Roll Up]	2	Assets [Roll Up]	Part of disclosure	Satisfies Balance Sheet disclosure	True	CONSISTENT	Assets [Roll Up]
Net Income (Loss) [Roll Up]	3*	Liabilities and Equity [Roll Up]	Part of disclosure	Satisfies Balance Sheet disclosure	True	CONSISTENT	Liabilities and Equity [Roll Up]
Cash Flow Statement [Roll Forward]		Income Statement	Required disclosure	Disclosure always required	True	CONSISTENT	Income Statement
Net Cash Flow [Roll Up]	5	Cash Flow Statement, Direct Method	Required disclosure	Disclosure always required	True	CONSISTENT	Cash Flow Statement, Direct Method
Cash and Cash Equivalents [Roll Forward]	6	Receivables (Roll Forward)	Line item exists, then disclosure required	Required because line item basic:Receivables was reported	True	CONSISTENT	Receivables [Roll Forward]
Receivables [Roll Forward]	· · ·	Cash and Cash Equivalents [Roll Forward]	Line item exists, then disclosure required	Required because line item basic:CashAndCashEquivalents was reported	True	CONSISTENT	Cash and Cash Equivalents [Roll Forward]
Inventories [Roll Forward]		Inventories [Roll Forward]	Line item exists, then disclosure required	Required because line item basic: Inventories was reported	True	CONSISTENT	Inventories [Roll Forward]
Property, Plant and Equipment [Roll Forward]	9	Accounts Payable [Roll Forward]	Line item exists, then disclosure required	Required because line item basic:AccountsPayable was reported	True	CONSISTENT	Accounts Payable [Roll Forward]
Accounts Payable [Roll Forward]	10	Property, Plant, and Equipment Roll Forward	Line item exists, then disclosure required	Required because line item basic:PropertyPlantAndEquipment was reported	True	CONSISTENT	Property, Plant, and Equipment Roll Forward
Long-term Debt [Roll Forward]	11 >	Long-Term Debt [Roll Forward]	Line item exists, then disclosure required	Required because line item basic:LongtermDebt was reported	True	CONSISTENT	Long-Term Debt [Roll Forward]
Retained Earnings [Roll Forward]	12	Retained Earnings [Roll Forward]	Line item exists, then disclosure required	Required because line item basic:RetainedEarnings was reported	True	CONSISTENT	Retained Earnings (Roll Forward)
Inventories (Roll Up)							
Finished Goods [Roll Up]							

Note the last two Blocks: Inventory [Roll Up] and Finished Goods [Roll Up]. Those two disclosures are reported but they are not required by the reporting checklist. If you look at the Disclosure property of those two Blocks, you will note that the value is not assigned. This is because the reporting checklist has no knowledge of those disclosures.

This report is consistent with the reporting checklist but has provided two additional disclosures that were not required by the checklist.

STEP 3: Disclosure mechanics.

Now click on the document window "Disclosure Mechanics Validation Results":

Instance (basic-SampleInstance-EmbededModelStructureReportingChecklistDisclosureMechanics.xml)				Taxonomy (b	Taxonomy (basic.xsd) Model Structure Validation Re		tion Result	n Result Disclosure Mechanics Taxonomy		Disclosure Mechanics Validation Result 🗙		
	Show more information											
Prin	Primary Information											
#		Disclosure	Category	Level	Pattern	Disclosure Found	Disclosure Consist	ent Applicable	Representatio	on Concept [TEXT BLOCK]	Represent	tation Concept DETAIL
Ŧ	1	Accounts Payable [Roll Forward]	Unknown	Level4Detail	RollForward	True	CONSISTENT	True	NOT-EXPECTE	ED	Accounts	Payable
±	2	Assets [Roll Up]	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTE	ED	Assets	
ŧ	3	Balance Sheet	Statement	UNKNOWN	Component	True	CONSISTENT	True	÷		-	
Ŧ	4	Cash and Cash Equivalents [Roll Forward]	Unknown	Level4Detail	RollForward	True	CONSISTENT	True	NOT-EXPECTE	ED	NOT-FOU	ND .
Ð	5	Cash Flow Statement, Direct Method	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTE	ED	Net Cash	Flow
±	6	Income Statement	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTE	ED	Net Incom	e (Loss)
Ŧ	7	Inventories [Roll Forward]	Unknown	Level4Detail	RollForward	True	CONSISTENT	True	NOT-EXPECTE	ED	Inventorie	'S
Ð	8	Liabilities and Equity [Roll Up]	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTE	ED	Liabilities a	and Equity
±	9	Long-Term Debt [Roll Forward]	Unknown	Level4Detail	RollForward	True	CONSISTENT	True	NOT-EXPECTE	ED	Long-term	Debt
Ŧ	10	Property, Plant, and Equipment Roll Forward	Unknown	Level4Detail	RollForward	True	CONSISTENT	True	NOT-EXPECTE	ED	Property,	Plant and Equipment
Ξ	11	Receivables [Roll Forward]	Unknown	Level4Detail	RollForward	True	CONSISTENT	True	NOT-EXPECTE	ED	Receivable	ES
	F	Rules Line of Reasoning										
	This disdosure: disdosures:ReceivablesRollForward											
	0	UST be represented as a Level 4 Disclosure	Detail with the	concept arrang	ement pattern:	cm:RollForward						
		cm:RollForward REQUIRES beginning/ending b	alance: basic:R	eceivables								
Ŧ	12	Retained Earnings [Roll Forward]	Unknown	Level4Detail	RollForward	True	CONSISTENT	True	NOT-EXPECTE	ED	Retained I	Earnings

[CSH: Note that line #4 related to the cash and cash equivalents roll forward which says NOT-FOUND is a bug in the application. This bug is being fixed.]

The disclosure mechanics validation checks to make sure that disclosures are created consistently with mechanical, logical, mathematical, and structural rules. Click on line #11 to open that rule information. Notice that the disclosure Receivables [Roll Forward] is required to be a roll forward and it is required to have the concept "basic:Receivables" as the beginning and ending balance of that roll forward.

If you look at the report fragment or Block you see:

Instance (basic-SampleInstance-EmbededModelStructureRe	portingChecklistDisclosureMechani	ics.xml) × Taxonom	iy (basic.xsd) M	odel Structure Validation Re	sult Disclosure Me	chanics Taxonom
Blocks (14)	G	Rendering	Model Structure	Fact Table	Business Rules Structur	e Business Re
C Network View C Component View C Bl	ock View	Component: (Netwo Network	1220 - Disclosure -	Receivables Roll Forward	1	1
Filter Type Filter Level	Filter Status 🔻	Reporting Entity [Avid	Implied [Table]	2091013	27dE0f7ch04afd http://c	tandarda isa oʻ
Factor tout to films		Reporting Entry [Acc	J	500101.	5705617606 1 810 http://s	atal luar us. iso. u
Enter text to litter	·					
Assets [Roll Up]				Period [/	Axis] 🚽	1
Liabilities and Equity [Roll Up]		Receivables [Roll For	ward]	2018	3-01-01/2018-12-31	1
Net Income (Loss) [Roll Up]		Receivables [Roll F	orward]			
Cash Flow Statement [Roll Forward]		Receivables Beginnin	g Balance		1,000	
Net Cash Flow [Roll Up]		Sales 2			4,000	
Cash and Cash Equivalents [Roll Forward]		Collection of Receivab	les 2		(3,000)	
Receivables [Roll Forward]		Additions to Allowance	e for Bad Debts		0	
Inventories [Roll Forward]		Bad Debts Written Of	F		0	
Property, Plant and Equipment [Roll Forward]			Receivable	Ending Balance	2,000	
Accounts Payable [Roll Forward]					\smile	
Long-term Debt [Roll Forward]	Report Element Properties				23	
Inventories [Roll Lin]	Properties Labels Refer	rences Occurrences	To Do			•
Enished Goods [Roll Lin]	Report Standard Label	Receivables				
Lunardo opera from chi	Base Standard Label					1
	Documentation	No definition provid	ed.		÷	2
	Properties				~	
	Class	[Concept] Monetar	у			1
	basic		1			
	Name	basic:Receivables)			•
	Other				^	
	Debit As Of (astract)				-	
	Data Type	Monetary (xhrli:mo	netarvItemTvpe)			্য
	ID	basic_Receivables				-
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Reviewing that Block you see:

- That the receivables roll forward does, in fact, exist in the report.
- That it is, in fact, a roll forward as was expected (note the beginning and ending balance).
- That the concept "basic:Receivables" is the concept for the fact of that beginning/ending balance.
- That the roll forward mathematically rolls forward as expected which is indicated by the GREEN coloring of the ending balance.

The disclosure mechanics rules can be seen if you go to the "Disclosure Mechanics Taxonomy" document:

-	Arcrole	Order	Name
 Definition View 			
Accounts Payable [Roll Forward]			
> 🔷 Assets [Roll Up]			
> 🔷 Balance Sheet			
> Q Cash and Cash Equivalents [Roll Forward]			
> 🔷 Cash Flow Statement, Direct Method			
> 🔷 Income Statement			
> 🔷 Inventories [Roll Forward]			
> liabilities and Equity [Roll Up]			
> 🔷 Long-Term Debt [Roll Forward]			
> Property, Plant, and Equipment [Roll Forward]			
Receivables [Roll Forward]			
 Receivables [Roll Forward] 		0	disclosures:ReceivablesRollForward
 RollForward] 	http://xbrlsite.azurewebsites.net/2016/conceptual-model/drules-arcroles/arcrole/disclosure-hasConceptArrangementPatter	1	cm:RollForward
Receivables	http://xbrlsite.azurewebsites.net/2016/conceptual-model/drules-arcroles/arcrole/conceptArrangementPattern-requiresConcept	2 🤇	basic:Receivables
Retained Farnings [Roll Forward]			

STEP 4: More complex documents.

This example is fairly basic and used to communicate the ideas to someone trying to understand the basics of Blocks, Reporting Checklists, and Disclosure Mechanics. To get an even better sense of this after you understand the basics try these two documents provided in the "Get Started" icon in the application:

