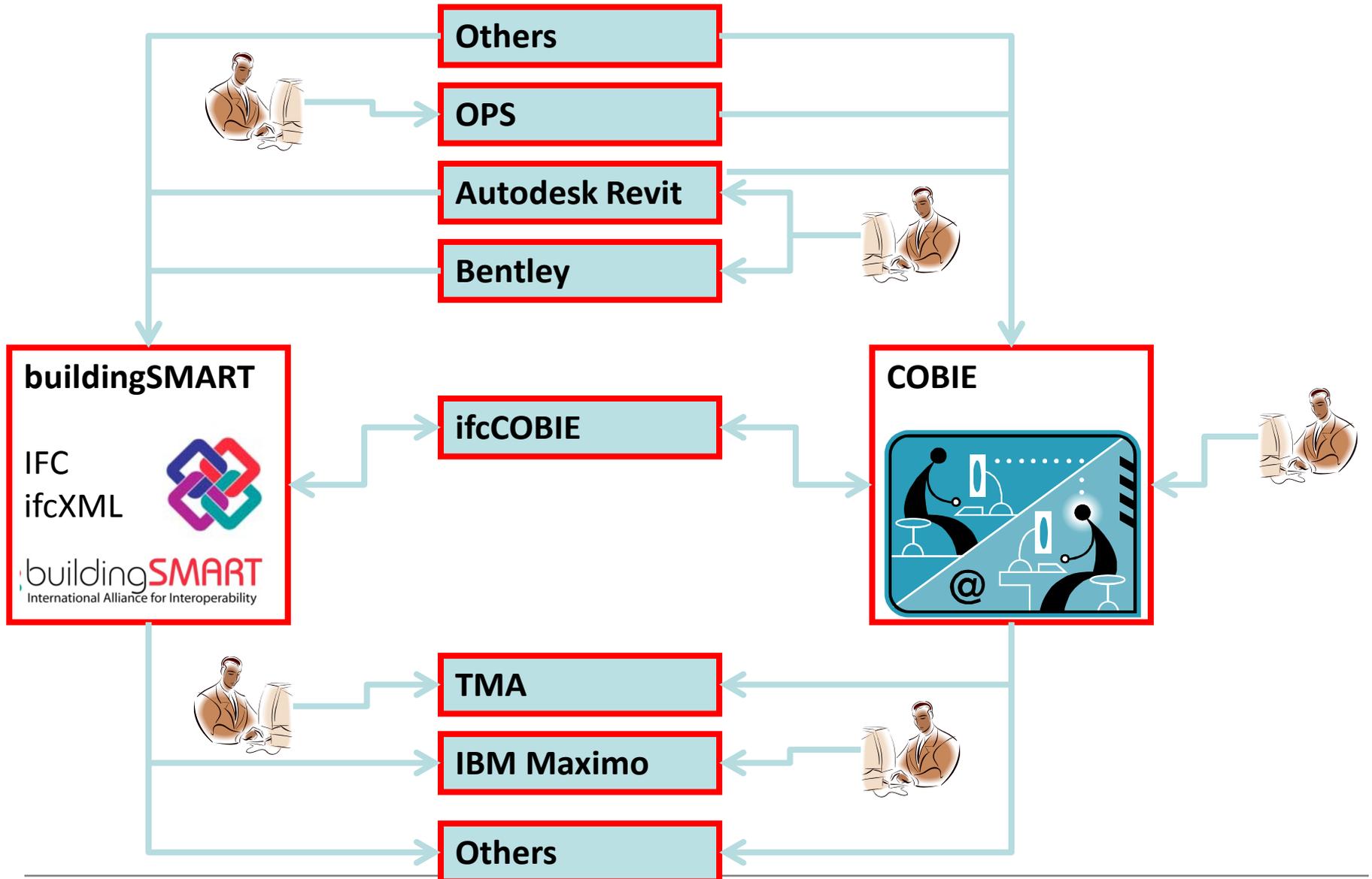


# verification of construction operation buildings information exchanges (COBIE)

definition of COBIE rules used to check  
presentation of COBIE verification results

Nicholas Nisbet, MA, DipArch  
buildingSMART ifcXML Coordinator  
Director, AEC3 Ltd

# COBIE paths

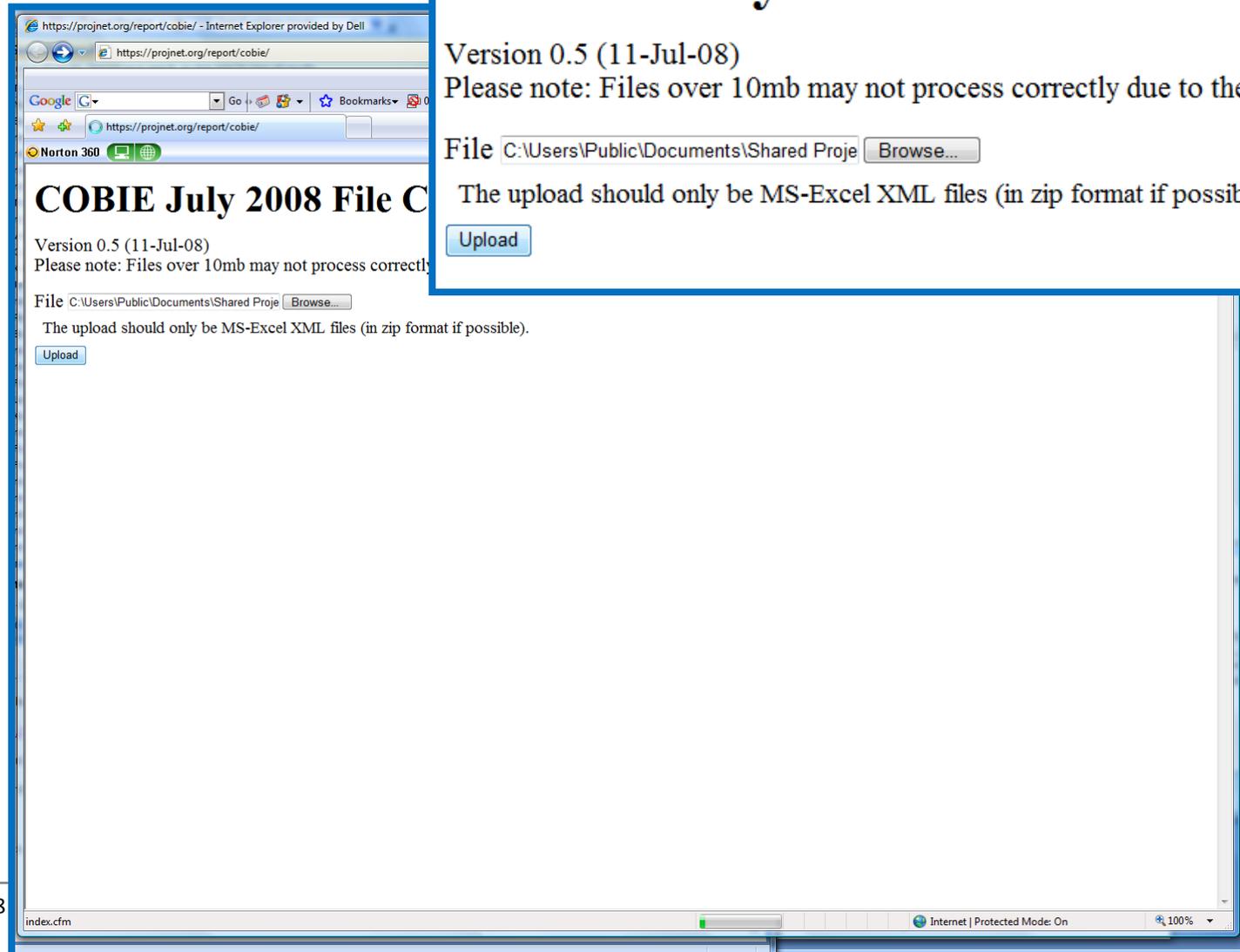


# COBIE compliance rules

Rule
All register items shall indicate their associated OmniClass product code.

Computer Rule								Human Readable	
RuleName	Sheet	ColumnLetter	ColumnName	Context	Function	Test	Level	Name	Rule
ProductType	06-Register	B	ProductType	Self	Table23Pick	FALSE	Sheet Failure	Unidentified Product	All register items shall indicate their associated OmniClass product code.
RegisterType	06-Register	C	RegisterType	Self	RegisterPick	FALSE	Sheet Failure	Unidentified Submittal	All register items shall indicate type of data to be submitted.
AssetType	06-Register	D	AssetType	Self	AssetTypePick	FALSE	Sheet Failure	Unidentified Asset	All register items shall indicate their asset type
FixedProdctData	06-Register	D	AssetType	Sheet	FixedProductData	FALSE	Sheet Failure	Missing product data	For a given 'Fixed' ProductType there shall be a minimum of one submittal of type "Product Data"
ApprovalType	06-Register	E	RegisterApprovalBy	Self	ApprovalTypePick	FALSE	Sheet Failure	Unidentified Approval	All register items shall indicate the level of approval needed by the owner or construction manager.
ShopDrawingApproval	06-Register	E	RegisterApprovalBy	Self	ShopDrawingApproval	FALSE	Warning	Shop drawing approval	Shop drawings should generally be provided for "owner approval"
ProductDataCertification	06-Register	E	RegisterApprovalBy	Self	ProductDataCertification	FALSE	Warning	Product data certification	Product data should generally be required as "contractor certified" submittals
RegisterName	06-Register	J	RegisterName	Self	Empty	FALSE	Sheet Failure	Register Name	All submittals must have a human readable name describing the product that is to be submitted.
RegisterReference	06-Register	K	RegisterReference	Self	Empty	FALSE	Sheet Failure	Spec Reference	All submittals must have a reference to the specification that requires that submittal
SystemIDList	06-Register	F	SystemIDList	Self	Exists	FALSE	Warning	Products not referenced	Product Data submittals should have a reference to the system(s) to which they belong.
SystemDList	06-Register	F	SystemIDList	Self	WellFormedList	FALSE	SheetFailure	Invalid data found	Data has been provided in an invalid list format.
SystemDValue	06-Register	F	SystemIDList	Reference	SystemReference	FALSE	SheetFailure	Systems not found	A value in the System ID list was not present in the Systems Worksheet.
SpaceIDList	06-Register	G	SpaceIDList	Self	Exists	FALSE	Warning	Spaces not referenced	Product Data submittals, that do not have individually named components, should be identified by the spaces in which that product may be found.
SpaceDList	06-Register	G	SystemIDList	Self	WellFormedList	FALSE	SheetFailure	Invalid data found	Data has been provided in an invalid list format.
SpaceDValue	06-Register	G	SpaceIDList	Reference	SystemReference	FALSE	SheetFailure	Spaces not found	A value in the Space ID list was not found in the Space Worksheet
ExternalSystemName	06-Register	H	ExternalSystemName	Sheet	ExternalSystemName	FALSE	Warning	Data source not identified	If COBIE data was created by software export, name of system shall appear here
ExternalNameID	06-Register	I	ExternalNameID	Sheet	ExternalGlobalID	FALSE	Warning	Global ID not identified	If COBIE data was created by software export, identifier shall be provided and maintained by software
ExternalNameUnique	06-Register	I	ExternalNameID	Sheet	ExternalUniqueID	FALSE	Sheet Failure	Non-unique global ID	If COBIE data was created by software export, the identifier shall be unique

Checking: <https://projnet.org/report/cobie/>



## COBIE July 2008 File Checker

Version 0.5 (11-Jul-08)

Please note: Files over 10mb may not process correctly due to their size.

File

The upload should only be MS-Excel XML files (in zip format if possible).

# COBIE compliance

- implementation issues
  - register types not consolidated.
- missing data
  - replacement cost and expected life not usually found.
- derivable
  - consolidation could be done manually.
- non-compliance
  - missing links.

		COBie
	Route	C/T ratio
OPS	direct	22.578
Bentley	via IFC	4.071
Revit	direct	0.532
Revit	via IFC	5.516
Vectorworks	via IFC	1.000