Draft SDMX Technical Standards (Version 2.0) - Disposition Log of Public Comments

Guide to organization of comments log:

Comments are numbered on a by-institution basis, with each institution having an abbreviation (ie, “ABS” for Australian Bureau of Statistics). Overall log is organized alphabetically by country.

- **Australia** (Australian Bureau of Statistics – ABS)
- **Italy** (Bank of Italy – BOI, Italian National Institute of Statistics – ISTAT)
- **Sweden** (Statistics Sweden – SCB)
- **United Kingdom** (Office of National Statistics – ONS)
- **United States** (Federal Reserve Board – FRB, Federal Reserve Bank of New York – FED)

No.	Organisation	Name	Document/ Standard	Line No.	Problem/Issue	Suggested Solution	Disposition
1	ABS	Graham Oakley	SDMX Framework	656	should the reference be to 2.0 instead of 1.0		Noted and corrected.
2	ABS	Graham Oakley	SDMX Framework	740-742	It appears that begin and end of sentences are mixed, eg "For all SDMX-EDI message types ... " sentence concludes with reference to SDMX-ML, and vice versa in next sentence. Also suggest that Roman numbers for subsections V and VI be changed to 5 and 6 for consistency with other sections.		Agreed, this will be fixed.
3	ABS	Graham Oakley	SDMX-ML Schema		Basically it is very useful stuff - giving a much more detailed description of the elements that make up the various SDMX message types, and the way these elements		Agreed. The intent is to fine-tune the specifications as they are adopted. Because of its increase in scope,

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					interact (both inheritance and the description of actual relationships between instances of the elements). The best way to get into the detail of this is to actually put it into practice		many parts of the 2.0 spec are new, and will benefit greatly from more implementation.
4	ABS	Graham Oakley	SDMX-ML Schema		It would be useful to have a couple of specific scenarios which we try to resolve using the SDMX standards; eg. Define a hierarchical representation of a small classification, Create a cross-sectional data cube for a Census dataset, etc. In looking through the documentation I have not found any problems as such, but again a more comprehensive analysis would occur if we tried to put these things into practice		The idea of examples is very good, and much in line with other commenter's views. Work moving forward will try to produce and document good examples in various domains, to show how SDMX is applicable.
5	ABS	Graham Oakley	SDMX-ML Schema		Things look backwardly compatible with V1.0.		As much as possible this is true, but there will be some changes to the names of attributes where these were inconsistent in version 1.0 which are therefore not backward compatible.
6	ABS	Graham Oakley	SDMX-ML Schema		Generic Data is described as 'used to convey data in a cross-key-family form' where		For all data sets, you need only one schema – Generic

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					as Compact Data 'is specific to each key family, according to standard mappings'. What does this mean?		Data. If you are using the compact form, each key family is expressed as a separate schema derived according to standard rules. The wording will be clarified
7	ABS	Graham Oakley	General		Until there are internationally agreed standards for a majority of the classifications used by organisations to describe data, there are going to be real problems in interoperability.		Content harmonization is very important for greater interoperability. The SDMX technical standards do, however, allow for the definition of mapping tables between structures (such as data structure definitions) and between code lists, and between concepts schemes.
8	ABS	Graham Oakley	SDMX-ML Schema		Not sure what annotations would look like in the XML	Provide some example annotations in one of the example XML files	Noted and agreed.
9	ABS	Graham Oakley	SDMX-ML Schema		I would like to know more about the Key Family Specific Data Schemas (mentioned in section 6.5 of Framework document) which >seems to allow an agency to add its own content into the Key Family definitions will this		Yes – although this is possible in the generic formats as well. Typically, an attribute is declared in the key family to hold the local IDs at the series level.

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					allow us to incorporate our own Time Series IDs		
10	ABS	Graham Oakley	SDMX Registry Interfaces		Table of Contents (ToC) needs a bit of work on heading of sections Not sure about trying to have the consistency of sub-section headings work: looks a bit odd with "Model" or "The Model" as the title of numerous sub-sections. Probably Needs to be qualified with the model (diagram) type eg. 7.1.2 "Organisation Model". Maybe OK for "Functions and Behaviour" - seems to be the main one repeated with "Model".		To be reviewed.
11	ABS	Graham Oakley	SDMX Registry Interfaces		6.2.1 and 6.3.1 both "Basic concepts"		To be reviewed.
12	ABS	Graham Oakley	SDMX Registry Interfaces		Prefer capitals to start all words in a heading, except "and", "the", "for"... I note this is generally the case of the headings in the body, but not the ToC.		These will be reviewed.
13	ABS	Graham Oakley	SDMX Registry Interfaces	e.g. 183	Note use of English spelling here, not US for Organisation. Happy with that as long as consistent throughout whole Standard.		ISO prefers the Oxford English Dictionary for English, which accounts for the choice of spelling. Consistency will be checked.
14	ABS	Graham Oakley	SDMX Registry Interfaces		Sections 10 and 11 have same name. Looks like it		Noted – this will be fixed..

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					should all be Section 10 unless the real Section 10 inadvertently 'copied over'. 11 is currently a copy plus more of section		
15	ABS	Graham Oakley	SDMX Registry Interfaces		Agree "Subscription" and "Notification" be in same section as n.1 and n.2		Noted.
16	ABS	Graham Oakley	SDMX Registry Interfaces		Needs indentation for Sub-sections		Noted.
17	ABS	Graham Oakley	SDMX Registry Interfaces		Mix of Portrait/Landscape pages is inconsistent and a bit annoying - probably required for some diagrams but other tables look like they could be Portrait eg. 6.2.3, 7.2.3.		Noted – formatting will be reviewed.
18	ABS	Graham Oakley	SDMX Registry Interfaces		Landscape 'tables' and many Portrait Tables don't use row/column lines . Prefer consistency with other tables. eg Portrait tables 5.1.1, 5.2.2,6.1		The line numbering is added automatically – these will be made consistent if possible.
19	ABS	Graham Oakley	SDMX Implementor's Guide		The "push" and "pull" discussion (3.1.2) interesting. Maybe this should be a grouping factor for the extent of SDMX compliance/capability. It might be possible for some sources to adopt a "pull only" policy to supply of data and metadata in SDMX format. Also, it would seem that an organization could use both scenarios e.g. push for data and pull for reference metadata		Both scenarios could easily be used in an application. Both mechanisms are supported

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20	ABS	Graham Oakley	SDMX Implementor's Guide		The item association idea (3.2.3.4) does seem promising and could support classification correspondences etc.		The structure of the model uses this basic pattern in many places, which is very helpful in some model-driven development environments
21	ABS	Graham Oakley	SDMX Implementor's Guide		If I am interpreting the UML correctly, it seems that each item can only belong to one scheme. This potentially leads to a lot of duplication in the registry if there are schemes that conceptually contain some items in common, but each also has some distinct items. The implications seem to be across registries (eg it does not seem possible to say "this scheme contains those items which have been standardised internationally and these additional ones which are local to us") as well as within them. Item associations may be one way to link "scheme specific" items back to some "standard" items - although it is not clear that the "scheme specific"items can be linked back via a single item scheme association to items that belong to more than one scheme (eg to express the idea "some items in this		This is an area where further implementation will probably help clarify requirements for future revisions of the standard.

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					scheme are equivalent to international standards while others are ABS standards") In any case, setting up many item scheme associations in addition to the item schemes themselves may prove not to be very practical. An alternative approach of allowing the same item to belong to multiple schemes may be problematic for other reasons (eg how to treat the different schemes if/when that item is updated).I am not sure the SDMX implementation is necessarily the wrong way to go - the implications just need to be thought through		
22	ABS	Graham Oakley	SDMX Implementor's Guide		It would be interesting to have more on the "validity start and stop date". Is any structure validation proposed? (Depending on how "valid" is defined, our experience shows there may be "valid" reasons for using a code after its "validity" date.) Is the means of saying "this item replaced that item after this date" spelled out?		A versioning mechanism is available to help support the need for historical versions of codelists. Be aware, too, that some of this management is seen as application functionality which is not really needed for the simple exchange of structural metadata between counterparties.

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							Others have made similar comments, however – consideration will be given as to how this could be supported in revisions.
23	ABS	Graham Oakley	SDMX Web Services Guidelines		Note same consistency issues mentioned under Section 4 re US/English spelling, use of commas		Noted – this will be reviewed.
24	ABS	Graham Oakley	SDMX Web Services Guidelines		Agree with conformance with WS-I.		Noted.
25	ABS	Graham Oakley	SDMX Web Services Guidelines		Should para starting line 184 (use of <wsdl:import> get more prominence- suggest its own subsection; also next para. Possibly something like: 2 ... 2.1 Web Services Types 2.2 Web Services Type Reference 2.3 Web Services: Types Supported		Comment noted. This area is one which requires more work to fully understand going forward, but appropriate changes will be made if possible.
1	Bank of Italy	P. Milani	General		The overall documentation could be improved by developing a guideline to include	i) significant examples on how to introduce SDMX standards in an organization ii) make it clear that, although SDMX v.2 standards can be seen as complex and articulated, their application to simple cases is really simple	i) a “USER Guide” is envisaged that should address these issues. ii) Comment noted. This issue is similar to (i) above iii) Agreed. Sections indicating future direction will be added.

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						iii) give a picture of the envisaged evolution (are present user requirements fully satisfied by v.2 ? what else remains to be done	
2	Bank of Italy	P. Milani	SDMX Registry Interfaces		Is it envisaged that the registry will undertake a consistency check of related definitions submitted to the RR one after another?		True – referential integrity is required by the specification.
3	Bank of Italy	P. Milani	SDMX Registry Interfaces		We would ask SDMX to formulate a statement of direction about the possible definition of a dictionary component for data administration as part of the registry specification		Comment noted, but this is outside the scope of a technical specification
4	Bank of Italy	P. Milani	SDMX-ML Schema	1346-1360	The text limits the usage of non coded representation (i.e. where there is no explicit code list declared in the data structure definition) to some dimension types only (Entity, Time, Count);	Remove this limitation or at least extend the list of Dimension types that can have a non coded representation	Comment noted. This limitation will be removed.
5	Bank of Italy	P. Milani	SDMX-ML Schema		It does not seem possible to apply constraints to these (see 4 above) non coded dimensions. Is this correct and, if so, why?		Any type of string is allowed that is consistent with the representation in the structure definition.
6	Bank of Italy	P. Milani	SDMX-ML Schema		It could be useful to have the possibility to qualify in a flexible way the specific role	Extend the possibility to define roles to all of Dimension, Measure,	The list of role types will be extended and any

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					played by some concepts, not limited to Entity, Time and Count only but extended also to e.g. unit of measure, scale, decimals and so forth	and Attribute and extend the list of roles to include all of: Entity Time Count Identity Measure Type Unit Frequency	component type (Dimension. Attribute, Measure) will be allowed to link to a role. The Implementors guide will be updated to identify the profile of SDMX that works with SDMX-EDI and SDMX-ML, and the schemas will be updated.
7	Bank of Italy	P. Milani	SDMX-ML Schema		We cannot understand why the "frequency" has such a special treatment (for time series, always a dimension and in the first position) in a generic standard like SDMX v.2. In fact, "frequency" could be an attribute in case of data flows where there are no siblings. We are fully aware of the need to ensure backward compatibility with v.1 and with SDMX-EDI (former GESMES/TS), and we endorse it of course, but we propose to handle this requirement in a less "constrained" way (e.g. in the textual part of SCHEMA documents) and to abandon the compulsoriness of "frequency" as a dimension in time series	Do not mandate that a specific role be played by a specific component type (e.g. Frequency could be an Attribute or a Dimension)	Comment noted. Please be aware that frequency is not constrained in this way in SDMX-ML other than as a best practice. The mechanism in (6) above will make this function more generic
8	Bank of Italy	P. Milani	SDMX-ML Schema	275-277	Although the triple "key family (KF)-data flow (DF)-	SDMX should more clearly formulate its	Comment noted and agreed.

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				1970-3973	constraints on DF" broadly resembles now to the structure and the definition of the "cube" in the Banca d'Italia perspective, still the SDMX requirements and known issues let envisage an SDMX vision of cubes as something inherently different from the mentioned triple. We would like to point out that, in our vision and according to present v.2 draft, cubes are a general way to define data and, as such, they diminish the risk that a software developer builds specific software to handle time-series (TS) and cross-sectional (XS) data, (we would notice that e.g. SDMX-ML SCHEMA document spends a lot of pages speaking of TS data and a lot of other pages speaking of XS data, so giving the impression that they are two really and deeply different thing) thanks to the introduction of a higher-level concept that includes both as specific cases .	vision about the role of cubes in its proposal.	
9	Bank of Italy	P. Milani	SDMX-ML Schema		The Banca d'Italia perspective has two more aspects, someway disregarded in this draft, i.e. the need to augment the kind of data controls and to handle	See details in (10) and (11)	See dispositions of (10) and (11) below.

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					historicity in content variation. Both arguments are linked to data quality assurance (It has to be noted that also hierarchies between code list elements contribute to data quality assurance, especially when validation requires calculations.)		
10	Bank of Italy	P. Milani	SDMX-ML Schema		Regarding controls definition, the introduction of "constraints" gave power to SDMX standards. However, the "constraints" construct is unable to define more complex and articulated controls, i.e. controls that span over more than one data and that often imply calculation capabilities. The SDMX Information model contains a transformations and expressions model to support this requirement. Looking at the overall SDMX documentation, we deem that it does not give sufficient indications about the meaning, possible usage and envisaged evolution of the transformations model.	SDMX should formulate a statement of direction about its intention to really handle more complex and articulated controls.	The mechanisms already in the model should be extended in future versions to support the neutral expression of the types of calculation you describe. This could include bindings to accepted expression languages. One change to the current version which would support this requirement would be the introduction of classes explicitly describing process steps, to which calculations and transformations could be linked. This possibility will be examined for

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							addition to the current version.
11	Bank of Italy	P. Milani	SDMX-ML Schema		Historicity is a slightly tricky topic, that is someway related to data quality. We distinguish between information systems historicity (ISH) and real world historicity (RWH). The ISH refers to the time-stamp when a specific modification applied to an information system content: e.g. the Germany union has been registered in the system at the 1st of January 1990. The RWH refers to metadata variation over time, e.g. to the fact that up to December 1989 there were East and West Germany and from December 1989 onward there is only Germany . ISH does not affect data administration and perhaps is even not handled by every information system. On the contrary, RWH is important in case of data that span over time and its handling criteria must be someway known to the software system, just to properly answer (at least) to the following use cases: (i) please, send me Germany monthly data from e.g. January 1987 up to the	SDMX should formulate a statement of direction about its intention to handle historicity as defined above and, if yes, according to what criteria.	The mechanisms already in the model provide the (meta)data needed to support historicity (version, date effective, date superceded). It is not within the scope of a technical specification to dictate how these mechanism are to be used for the various use cases. This is an area where SDMX possibly could provide some guidance in its contents standards or implementation guides outside of the technical specifications.

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					current date and according to the 1987 situation (East Germany, West Germany); (ii) please, send me Germany monthly data from e.g. January 1987 up to the current date and according to the current situation (Germany); (iii) please, send me Germany monthly data from e.g. January 1987 up to the current date and according to the real situation at every time (East Germany and West Germany until November 1989, Germany from December 1989 onward). Use case (i) has two TS, one with East Germany and one with West Germany. Use case (ii) has one TS, with Germany. Use case (iii) has three TS, one with East Germany up to November 1989, one with West Germany up to November 1989 and the last with Germany from December 1989 onward. There can be many criteria to be used in data administration to handle RWH and they can be implemented in many ways, of course with the aim to always allow data validation. Banca d'Italia implements use case (iii) in a generic way, because it is the		

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					most frequent in our business, while the other use cases are implemented by “ad hoc” solutions.		
12	Bank of Italy	P. Milani	SDMX Framework	86	Querying is on metadata only or also on data ? Moreover, it is unclear if the registry specification is normative or not.		The intent here is to point out that the data is not stored in the registry - only the metadata about it can be queried. This point and the normative status of the registry document will be clarified.
13	Bank of Italy	P. Milani	SDMX Framework	96	Do you refer to registry interface specification ?		This includes but is not limited to the use of web services in a registry based scenario.
14	Bank of Italy	P. Milani	SDMX Framework	112-129	The evolution is unclear; it could be better to use “business” terminology.		Comment noted, but a formal technical specification requires a technical description of what has changed.
15	Bank of Italy	P. Milani	SDMX-Framework	143, 150	It could be more appropriate to use the term “protocol” instead of “process”. An exchange protocol can be considered as the set of rules, including the format, that two organisations willing to exchange data must share.		The term protocol is sometimes understood as covering a set of processes, rather than a single process as intended here. The current wording was used and approved in

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							Version 1.0 of the standards – it remains here for consistency.
16	Bank of Italy	P. Milani	SDMX-Framework	187-188	Focus restricted to dissemination seems limiting, because there is also the exchange.		Comment noted. Appropriate changes will be made.
17	Bank of Italy	P. Milani	SDMX-Framework	201-202	If this is the primary focus of SDMX, what is the role of transformations model ?		Transformations are a supporting aspect of data exchange
18	Bank of Italy	P. Milani	SDMX-Framework	211	Not only “numeric”, also “non-numeric”. Is it right ?		Agree. Will be fixed.
19	Bank of Italy	P. Milani	SDMX-Framework	245-251	There seems not to be enough focus on controls.		Comment noted. Appropriate changes will be made.
	Bank of Italy	P. Milani	SDMX-Framework	254	Not only “exchange, but also “dissemination”		Agreed. This will be fixed.
20	Bank of Italy	P. Milani	SDMX-Framework	266	The expression “much more complete” seems to imply that there is something else to do. Why do you not specify what ?else		The final section of the document will discuss future goals in more detail.
21	Bank of Italy	P. Milani	SDMX-Framework	308	An SLA is important not only in the exchange but also in the dissemination, if there is a calendar.		Comment noted. Appropriate changes will be made.
22	Bank of Italy	P. Milani	SDMX-Framework	317	“Subjects” is written but the right word is perhaps “subsets”.		Comment noted. Appropriate changes will be made.
23	Bank of Italy	P. Milani	SDMX-Framework	315-323	Once again one speaks about constraints without introducing “transformations”.		Comment noted, This will be reviewed and changes will be

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							made if warranted.
24	Bank of Italy	P. Milani	SDMX-Framework	325	The “brief summary” misses hierarchic code lists and constraints.		Comment noted and agreed. The wording will be reviewed and fixed.
25	Bank of Italy	P. Milani	SDMX-Framework	325	“Category scheme”, “cube structure”, “cube definition”: these concepts should be explained in a more “business oriented” and in a less “tautological” way.		Comment noted. This will be reviewed to see if changes can be made.
26	Bank of Italy	P. Milani	SDMX-Framework	391-392	The difference between cube and data flow is unclear.		Agreed. This will be clarified.
27	Bank of Italy	P. Milani	SDMX-Framework	395-397	reporting schemes do not exist in a primary reporting context only, because it is a matter of how to organise reporting and its description. Moreover, a “reporting taxonomy” (RT) could also allow to specify what DF are to be sent together.		Comment noted. This will be reviewed and clarified in the text.
28	Bank of Italy	P. Milani	SDMX-Framework	398	Paragraph 3.3.1 this paragraph seems very important to understand SDMX focus, so it could be positioned in the document accordingly. Moreover, its understanding could be improved with proper examples.		Comment noted. This paragraph will be re-written.
29	Bank of Italy	P. Milani	SDMX-Framework	474	Paragraph 3.5 its best positioning could be after paragraph 3.1. Moreover, with reference to its last sentence, we are unsure to have correctly understood what standards		Comment noted. This will be reviewed to see if changes can be made.

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					support what scenario.		
30	Bank of Italy	P. Milani	SDMX-Framework	519-538	We did not understand the SDMX vision about the relationship between cubes and KF. Moreover, what is optimised for exchange (row 533): IM, ML or both ?		Relationship between cube and KF will be clarified. Both the IM and SDMX-ML are optimized for exchange – Wording will be reviewed and clarified.
31	Bank of Italy	P. Milani	SDMX-Framework	654-655	While topics such as "relationship with content standards" and "relationship with external standards" are typical of a "framework" document, we are unsure that this kind of document is the right place where to handle "conformance", assuming that "conformance" means the set of checks to be applied on messages. With reference to "relationship with external standards", we expect that (at least) XBRL, UBL and ebXML would be considered.		Statements regarding conformance are required in this position in the document per typical ISO formatting. The addition of sections regarding other external standards will be considered.
32	Bank of Italy	P. Milani	SDMX Conceptual Information Model		As a general remark, we deem it sensible that the semantics of all constructs be clearly defined (e.g. ItemProperty and AssociationType within ItemSchema; moreover, if AssociationType can be used to define synonyms, this kind of relationship should be identified with a "Synonyms"		Comment noted. The actual role is identified by an Item in an Item Scheme. The roles are not pre-defined in the model. The text will be reviewed and amended as

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					role).		appropriate to ensure that this is clear.
33	Bank of Italy	P. Milani	SDMX Conceptual Information Model	114	Within KF modifications there are also “coded” measures. Is it right ?		Yes.
34	Bank of Italy	P. Milani	SDMX Conceptual Information Model	575	(Concept scheme): (i) we are unable to fully understand the meaning of Type class. Is it the class used to represent qualitative data ? (in FRAMEWORK document, row 125, there is written that “some support is provided for qualitative data”); (ii) we thought that “representation” was a property of “type” (e.g. an attribute of Type class), while they are really two separate and independent classes. What happens if a concept is associated to a “type” and “representation” inconsistent each other ? if there is the need to specify two different “representation” for a single concept , shall I duplicate the concept itself ? We deem it useful to specify examples that clarify the use of “type” and “representation”; (iii) we cannot imagine a possible use case for the overriding of the “type” of a concept used in a KF (rows 599-600).		Type is not the class which represents qualitative data. This separation of representation and type is required for backward compatibility with version 1.0, and is derived from GESMES/TS. The text will be reviewed and amended as appropriate to ensure that this is clear.
35	Bank of Italy	P. Milani	SDMX Conceptual Information Model	870	(KF): (i) dimensions are linked to KeyDescriptors with		(i) This is for compatibility with

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					an “ordered” attribute. Does it mean that concepts order is important ? if yes, why ? (ii) why not to envisage also “uncoded” dimensions ? (iii) the diagram specialises some dimensions (MeasureType, Frequency, Time). Why Frequency must always be a dimension ? Our opinion is that this is due to the presence of siblings. But also in case of siblings, the administrator may e.g. decide to include sibling elements in different data sets. In short, frequency may or may not be part of the key, depending on administration choices. Frequency as a mandatory dimension, and always the first in the list, is a GESMES/TS heritage, that must be assured for backward compatibility but not extended outside that context; (iv) why there is no specialisation for other dimensions, e.g. “entity”, that are important for the enhancement of the KF semantics ?		GESMES (SDMX-EDI) (ii) Un-coded dimensions are supported (with the caveat that these produce backward incompatibility with GESMES/TS.) (iii) See comment above regarding Frequency as a dimension – this is not required (iv) This specialization has been added in the extension of possible “roles” (see comments above) General comment. The sub classes of Dimension have been removed and replaced by an association to a Role which has an enumerated list of roles. The Role class is also associated to Measure and Attribute, this making it possible

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							to assign a role to any of the components of the key family.
36	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1107	Chapter 6 perhaps the cube is not integrated in the whole framework. More specifically, we understand that there is correspondence between CubeStructure and KF and between CubeDefinition and DFD, but where is the correspondent of DataSet for the cube ? how is it possible to transport data described by CubeDefinition ? Some minor remarks follow: (i) Cube ComponentSet and CubeItemSet seem to be used to identify the same thing, and the same applies to the couple CubeItem and CubeComponent. Is there a typo ?		Comment noted – this is correct. It is a known issue which will be addressed.
37	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1176	The “diamond” on the relation /grouping, linking CubeStructure to CubeComponentSet, should be coloured in black		This is a conceptual model, and the differences between composition and aggregation are an implementation issue.
38	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1202	The table should contain other roles relevant for automatic handling, like e.g. Unit, Scale, Precision.		Comment noted – see above. However, there will be a discrete list of roles – for reasons

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							of interoperability, it is not an extensible mechanism.
39	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1214	Chapter 7 As a general remark, transformations model seems not to be integrated in the whole IM. To be provocative, as its usage is unclear, one could ask what can we do with it that cannot be exploited with ItemSchemeAssociation.		Comment noted. Additions are being considered to the model to more fully support transformations (see comments above).
40	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1322-1333	We deem that the given example “E=mc2” is misleading, because transformations really act on cubes, or KF, only;		Comment noted, this example is to illustrate the simplest possible case.
41	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1274-1275	The problem of “complex” controls has been only partially handled; (iii) the BNF usage (row 1284) has been insufficiently explained; (iv) what is the use of OperatorSchema ? If it aims to formally define the operator “signature”, then maybe something is missing (e.g. the indication of operand types; how to describe operators, like sum and multiply, that admit a not predefined number of operands). In an “open” context like the SDMX one we deem it necessary the complete specification of the content of Operator Schema	Include in the v.2 documentation a correct explanation of the topic and a statement of direction for the future.	See comment above – this is work for future versions of the specification.
42	Bank of Italy	P. Milani	SDMX Conceptual	1631	Two kinds of graphs are		Noted and agreed.

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			Information Model		modelled: the level-based (LV) and the value-based (VB). LV is able to represent level graphs, while VB is able to represent whatever kind of graph. Reading the UML, it seems to us that Level class does not inherit from the abstract class Identifiable. If this is true, it is impossible to associate a description, also multi-language.		This has implications for both the model and the SDMX-ML implementation. (Validity dates will need to be added to the references to codes in the hierarchical codelist in the schema, but exist on the code in the model.) Also, this impacts the way levels are treated in both the model and the schema (they become identifiable).
43	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1675	As a further conceptualisation, we could distinguish graphs in: (i) graphs that do not admit cycles (so called “trees”); (ii) graphs that admit indirect cycles only (important e.g. for the description of calculation relationships); (iii) graphs that admit direct or indirect cycles (they can be used to describe recursive relationships). LV graphs are a specialisation of (i) type, while VB graphs can be of (ii) or of (iii) type.	If SDMX initiative shares this conceptualisation, an attribute could be added to Hierarchy class that specifies the kind of graph. A dictionary tool could use this attribute to validate the coherence of the graph, as specified by the administrator.	Comment noted – this case is supported through the use of typed annotations. A greater formalism, as suggested, may be possible in future versions.
44	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1768	We deem that constraints can be represented by the left part only of figure 38. Why		The left side (cube regions) cannot express constraints

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					the diagram is more articulated?		based on full keys, both options have been included.
45	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1768	How can we define, in CubeRegion, constraints related to “uncoded” dimensions or attributes?		The values in constraints are based on any valid value described in the appropriate representation. If this is other than a code, then you are using Value, with what amounts to an “equals” operator. The text will be reviewed and amended as appropriate to ensure that this is clear.
	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1768	A ContentConstraint can admit many CubeRegion. In what way do they relate each other ? with “union” operations ? with “intersection” operations ?		The described cubes are either included or excluded, which is explicitly stated when the constraint is created.
46	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1796-1799 1816-1817	There is a possible edit bug, because it seems to us that rows 1816-1817 must be shifted after row 1799		Comment noted – This will be corrected.
47	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1836-1837	Is it correct to attach calendar to the constraint ? Perhaps the calendar should be attached to the couple DF-provider instead.		The Calendar is a constraint, and thus can be attached to a data provider or a data flow, but may also be attached to a provision

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							agreement, which is the union of DF and Provider which you mention.
48	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1907	This refers to cubes, but cubes seem not to be handled in the exchange. Is really the RT a useless construct?		The RT has been changed to meet the commentor's requirements.
49	Bank of Italy	P. Milani	SDMX Conceptual Information Model	1924-1941	The described aspects should be better conceptualised.		This part of the model is being changed in response to other input.
50	Bank of Italy	P. Milani	SDMX Implementors Guide		The document has more or less the same structure of CONCEPTUAL DESIGN, although cubes, transformations and controls are not handled at all. Two general questions: the documents can be integrated? Why are they not aligned?		The documents will be aligned when released, but several presentations are made to meet the needs of different classes of users.
51	Bank of Italy	P. Milani	SDMX Implementors Guide	96	There is written that the aim of the document is to better qualify IM, while in FRAMEWORK document (rows 89-90) there is written that the document aims to help in understanding and using the whole set of SDMX specifications.		Comment noted – this inconsistency will be fixed.
52	Bank of Italy	P. Milani	SDMX Implementors Guide	433	The receiver is a "data consumer"? if not, where is the receiver?		Yes, the receiver is a consumer.
53	Bank of Italy	P. Milani	SDMX Implementors Guide	484	Why not to consider also comment texts? Why are they		There is no comment text in the

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					reference metadata ?		diagram, nor any discussion at this point of reference metadata.
54	Bank of Italy	P. Milani	SDMX Implementors Guide	696-697	Constraints are a very important construct and the document should explain them, also with examples.		Comment noted, and changes will be made.
55	Bank of Italy	P. Milani	SDMX Implementors Guide	719-720	Why not to make a “business” example ?		Comment noted – this will be added.
56	Bank of Italy	P. Milani	SDMX Implementors Guide	761	Figure 35 It seems to us that the model in the left side contains classes not previously described.		Comment noted, but the inclusion of these is needed for reference purposes. Additional explanations will be considered.
57	Bank of Italy	P. Milani	SDMX Implementors Guide	924-925	What are the criteria used in the text building? Are they metadata or are they hard-coded?		These criteria vary widely between metadata repository owners and are not standardized within this specification.
58	Bank of Italy	P. Milani	SDMX Registry Interfaces		The aim of “functions and behaviour” tables is not completely clear to us: do they contain the API “signature” ? or the description of RR ML ? or what else?		The tables are meant to be a simplified view of the UML for those who do not understand UML notation well. Their purpose will be clarified.
59	Bank of Italy	P. Milani	SDMX Registry Interfaces		IM declares RT as an integral part of RR (see figure 39 of CONCEPTUAL DESIGN) but this document seems not to		Comment noted – the relevant registry interfaces will be added.

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					consider it. Perhaps because RR does not handle cubes ?		
60	Bank of Italy	P. Milani	SDMX Registry Interfaces	177	It could be sensible to speak about registry services, based on web technology.		Comment noted, but “web-services technology” has a different meaning than “registry services using web technology.
61	Bank of Italy	P. Milani	SDMX Registry Interfaces	213-214	It seems to us that IMPLEMENTOR does not handle this topic.		Agreed. The misleading sentence will be deleted.
62	Bank of Italy	P. Milani	SDMX Registry Interfaces	308-309	The phrase “extracting…concept values” seems interesting. What does it mean in practice ? It seems to us that the topic is not further developed.		It means the indexing of the values found in data sets and metadata sets. With this, the registry services can build registration constraints.
63	Bank of Italy	P. Milani	SDMX Registry Interfaces	432	Do you mean that an ebXML RR supports IM and RR as they are presently defined ?		Yes, it is possible to implement the SDMX registry on an ebXML RR, by mapping the IM and these interfaces against the ebXML RR model. (This “mapping” requires considerable development effort, of course.)
64	Bank of Italy	P. Milani	SDMX Registry Interfaces	436	The “list of packages” should be specified.		Agreed. Will fix.

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65	Bank of Italy	P. Milani	SDMX Registry Interfaces	580	Table 5 It seems to us that “category” definition is missing and this could be a serious failure, because we understand that “category” metadata is used to represent a taxonomy.		Category is a link object. With the redefined RT, this will also become an explicit linked object. (Category itself is maintained within the Structural Metadata).
66	Bank of Italy	P. Milani	SDMX Registry Interfaces	599-602	Why “push” and “bilateral” models are to be required? What does it mean ?		Comment noted – this will be clarified. The idea is that these interfaces could support some non-pull exchanges.
67	Bank of Italy	P. Milani	SDMX Registry Interfaces	677-679	Do constraints (typical “ex-ante” term) take into account actual domains (typical “ex-post term), as the text hints, or use domains (typical “ex-ante” term), as it should be in our view?		Please clarify. Note that the formal construct in our model for domains is the Category.
68	Bank of Italy	P. Milani	SDMX Registry Interfaces	1095	Chapter 12 It seems that SDMX-ML defines both data and metadata messages and registry services messages. It might be sensible if the two ML would be kept separate.		Sharing a single Message supports many web-services designs better (a common header allows for generic gateway applications which dispatch received messages once within the institution). This is consistent with version 1.0.
69	Bank of Italy	P. Milani	SDMX-ML Schema		The document could be better		The documentation

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					useful if “type XML” descriptions were ordered alphabetically. It seems to us that the message to be used to define a DF to RR is missing. Are we right or are we misunderstood something?		is grouped according to the schema ordering – that is, a type’s component types are grouped together, except for simple types which all appear at the end of each section. We will consider the comment, to see if a straight alphabetical ordering might be more useful, or if an index could be provided.
70	Bank of Italy	P. Milani	SDMX Conceptual Information Model	430	Figure 7 UsageStatus property can assume “mandatory”, “optional” or “conditional” values. For what refers to “conditional” value, it seems not to be defined how and where relating conditions are declared.		Comment noted (and agreed) – but this is a GESMES/TS backward compatibility issue.
71	Bank of Italy	P. Milani	SDMX Conceptual Information Model	448	The role played by “hierarchy” and “association” relations is not clear. Some example could help.		Comment noted. The text will be reviewed for clarification.
72	Bank of Italy	P. Milani	SDMX Conceptual Information Model	449	Word “one” after “a child item can have only” is missing.		Noted. Will be fixed.
73	Bank of Italy	P. Milani	SDMX Conceptual Information Model	462	The document speaks about “synonyms” and “correspondence” but there is		See above.

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					no definition of those terms.		
74	Bank of Italy	P. Milani	R1 – Information Model	482	Figure 9 We did not understand the role played by the UncodedArtefact class, that is not linked to any other element in the mentioned figure.		Whilst it is not linked to any of the classes in the pattern, it does play an important role in the pattern, as concrete classes are inherited from both UncodedArtefact and CodedArtefact. The text will be reviewed and amended as appropriate to ensure that this is clear.
75	Bank of Italy	P. Milani	R1 – Information Model	1095	In our understanding, RM are those metadata that can be attached to whatever model element and that can “live” autonomously from the element(s) they qualify. With this respect, the whole information model (IM) can be divided in two parts (or sub-models): “structural” (S) and “reference” (R), where S describes classes, relations and properties of multi-dimensional data definition that IM incorporates, while R allows the seamless expansion of S in terms of further properties. If we have correctly understood, we fully agree	To signal that, according to our experience, there would be some other properties worth to be included in the S sub-model , in order to enhance its semantic and then the power of a possible software that handles data defined according to IM rules Consolidate IM v.2 with what is now present, postponing to IM v.3 (2006) the IM evolution in terms of properties.	Comment noted.

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					and appreciate the general framework. Our sole comment refers to the scarcity of properties presently included in S, that seem to be more or less just those derived from “base” classes (i.e. code, description, validity dates). At the same time, we realise that our past interaction with SDMX guys focused essentially, if not exclusively, on the SDMX IM v.1 evolution in terms of new classes and relations, disregarding properties. The SDMX technical team did his very best, both in formally (UML) describing IM v.2 draft and in modelling (with RM) a controlled expansion of IM in terms of properties.		
76	Bank of Italy	P. Milani	Schema Design		It would be sensible to provide “narratives” with examples of the different XML “fragments”, instead of send back to the use of example XML files that are complete and then do not allow a step-by-step understanding.	Generally speaking, the SDMX-ML documentation should be complete and self-consistent, and the SDMX-ML understanding would by no means imply a thorough knowledge of IM, although that would help. Besides SDMX-ML documentation, the sole other knowledge possibly needed would just refer to the IM high-	Comment noted – documentation will be as complete as possible.

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						level modelling rules. SCHEMA DESIGN document should stick to this principle, that is scarcely present now	
1	Italy - ISTAT	Stefano De Francisci	Implementors Guide	160	Structural Metadata layer	Should be Structural Definition layer	This is agreed.
2	Italy - ISTAT	Stefano De Francisci	Implementors Guide	356	It is non clear what is the object of sections 4.3.2. – 4.3.5. In fact, the title of section 4.3.2. is referred to simple classification schemes, figure 8 describes a simple Item Scheme, whilst the text explains the structure of Item Schemes. But yet, in the class diagram shown in figure 11, the concept of Item Scheme comprises both simple Item Scheme and Complex Classifications one, but not the Item Scheme Association, just introduced in figures 9 and 10. At last, in fig. 10, drawing the Item Scheme Association, the association between Item Scheme Association and Item Scheme is not described. On the contrary, such an association is depicted in figure 9, dedicated to describe complex classifications.	to simplify and harmonize text and figures, for example integrating and reducing the text referred to figures 8 and 9.	This will be reviewed and the text amended appropriately.
3	Italy - ISTAT	Stefano De Francisci	Implementors Guide	356, 368,	The three schemes show two different rules to associate	to solve the ambiguity adopting the solution	Figures 8 and 9 will be changed.

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				377	Item and Item Scheme: whilst in figures 7 and 8 “Item scheme has item” (and the arrow moves from Item Scheme to Item), in fig. 9 “Item belongs to Item Scheme” (and the arrow moves from Item to Item Scheme). Moreover, in the class diagram of fig. 11 a multiplicity one-to-many is depicted as link between ItemScheme class and Item class, validating the rules stated in figures 8 and 10.	described in figures 8 and 10.	
4	Italy - ISTAT	Stefano De Francisci	Implementors Guide	345-352	Reading the schematics of complex classification (fig. 9) and Item Scheme Association (fig. 10) it seems that Item Association can have specific properties, distinct from the properties of Item. Nevertheless, in the class diagram of Item Scheme (fig. 11) properties are specified for the Item class only.		The Item Association inherits from the Item and so it inherits the Item Property. However, this section has been replaced by a “Structure set and mapping” section where the Property inheritance is made explicit.
5	Italy - ISTAT	Stefano De Francisci	Implementors Guide	388	representation	representation	Fixed
6	Italy - ISTAT	Stefano De Francisci	Implementors Guide	407	The role covered by the UncodedArtefact class in the scheme is not specified.		Lines 416/7 specify the role of coded and uncoded artifact.
7	Italy - ISTAT	Stefano De Francisci	Implementors Guide	153 443	There is a partial mismatch between the packages structure belonging to the Structural Definition layer, as	Especially the requirements for Cube Structure definition need an explanation in	Noted. The Cube Structure will be examined in light of this and

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					explained in fig 1 (line 153), and the structural features illustrated at line 443. Moreover, the Structural Definition layer is not entirely covered by the document and the organization of the sections lacks coherence compared to it, dealing with issues not defined at packages level. The comparison framework among packages, features and sections of the document supplied (not reproduced here)	order to show how SDMX Information Model deals with statistical data cubes.	other comments.
8	Italy - ISTAT	Stefano De Francisci	Implementors Guide	476	The concept of “frequency” is not referenced in the table		Noted. Diagram changed to indicate that Frequency is implied by time period.
9	Italy - ISTAT	Stefano De Francisci	Implementors Guide	476	Whilst most concepts (title, frequency, time period, measure type, observation value, source, publication date) have general purpose, valid for any subject matter domain, others (age range and region) describe concrete cases and seem to play the role of “instances of concepts of a table”.	In order to achieve the highest degree of generalization, the use of more general terms can be preferred. For example, using “territorial level” in place of region and “statistic series” in place of age range, we could obtain the same meaning through a more general structure. For the same reason, also the term “demographic type” could be generalized,	The point of the example is not to indicate best practices in generalized key family design but to provide an obvious example.

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						using, for instance, the term “statistic type”.	
10	Italy - ISTAT	Stefano De Francisci	Implementors Guide	476	To adopt “region” (or any other generic term) as only spatial reference of a table does not assure the full generalization of the information model. In fact, many kinds of statistical tables need a more detailed approach.	The spatial dimension can be divided in two further – more specific – concepts: [Territorial] Detail, that is to say the level of the specific territorial partition used in a table (like State, Regions, Provinces, Municipalities and so on) and [Territorial] Area, i.e. the specific territory covered by the data of the table. Combining detail and area we obtain the concept of territorial context, more flexible structure to handle territorial data. For example, adopting such an approach we could represent in a general manner data referred to the context of all the Provinces (detail level) of a specific Region (area)	See disposition 9.
11	Italy - ISTAT	Stefano De Francisci	Implementors Guide	490	Even if Key Family is a concept modeled by simple flat lists, it is important to show the capability of the Concept class to represent also hierarchical structures.	In order to represent hierarchies of concepts, a recursive link can be introduced on the Concept class.	Agreed. This ability will be mentioned in the document.
12	Italy - ISTAT	Stefano De Francisci	Implementors Guide	630	Figure Figure 13	Figure 13	Fixed

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13	Italy - ISTAT	Stefano De Francisci	Implementors Guide	660	From the example (box at the bottom of the figure 28) it seems that Concept is identified only by the couple maintenance agency:concept id and not by maintenance agency:concept scheme id:concept id, as stated in the text.		Agreed. New screen shots will be inserted.
14	Italy - ISTAT	Stefano De Francisci	Implementors Guide	752	Even if the model of Metadata Flow Definition is the same of the Data Flow Definition scheme (figg. 31 and 33), no constraints are specified for MetadataflowDefinition class.	to introduce specific constraints for Metadata Flow Definition could be useful in order to check the coherence of the system in phase of implementation.	Agreed. Metadataflow Definition can have Constraints and the diagram will be changed.
15	Italy - ISTAT	Stefano De Francisci	Implementors Guide	769-784	the list starts from #3.		Fixed.
16	Italy - ISTAT	Stefano De Francisci	Implementors Guide	1103	the fields of the table Hierarchy are not in bold font		Fixed.
1	SCB	Bo Sundgren	General		I think it is necessary that the group of consultants should be strengthened by a couple of experts from statistical agencies. I think that would be the only way to get real, good and substantial influence on the work from the world of official statistics, engaging people with sound knowledge about basic statistical concepts and about how people in statistical agencies deal with these matters in their		This comment is more at the organizational level – input is noted.

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					practical work.		
2	SCB	Bo Sundgren	General		Examples are needed in order for the proposal to have a chance of being understood and accepted by people in statistical offices. The very formal proposals should be explained and illustrated by means of relevant examples from the world of official statistics, covering a wide spectrum of statistics (social and economic, time series and cross-sectional, etc).		This is envisaged to be addressed in a "User Guide", involving examples from international organizations and national statistical agencies.
3	SCB	Bo Sundgren	General		There is the feeling that the abstract specification can describe things that SDMX clearly is not intended for. To say this slightly differently, I suspect that objects you'd never want to describe in the model are perfectly acceptable. This means there aren't enough attributes to characterize the things we (as statisticians - I guess) care about. The extra attributes will eliminate the unwanted cases I suspect the model describes.		The technical specifications do not dictate to statistical offices the attributes necessary to conduct their business - this specification provides a neutral technical framework which allows statistical offices to describe the attributes they need. Efforts such as the SDMX Content Guidelines may be an appropriate place for this type of standardization.
1	ONS	Bryan Fitzpatrick	General		Up to now the main focus when SDMX has been		Comments are noted. Much of

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					presented has been on technical aspects. This appeals to organisations that are focussed on a specific issue, that have the problem now, and that understand that the technical solution is immediately useful. The sponsor organisations mostly fall into this category - that is why they sponsored SDMX - and perhaps also do the central banks. But for National Statistical Institutes (NSIs) the position is different - dealing with the international organisations is a minor tactical matter and if SDMX is presented tactically they might adopt it for this purpose, but in as constrained and local a fashion as they can get away with. The NSIs do however have a significant strategic problem - they are all trying to come to grips with managing their metadata, reconciling it with versions from international organisations and international agreements, with versions promulgated by their own governments for internal country or whole-of-government use, and with sensible suggested versions from other NSIs. Moreover they would all rather use a		what you propose is organizational and is not directly related to the technical standards themselves. However, the technical basis for what you discuss has an impact on many of these points. As a technical basis for this direction, version 2.0 has implemented some features which make it a much more suitable tool for these types of applications. Notably, the ability to handle reference metadata, and the ability to make provisioning metadata and process available and visible to a community of users supports this perspective.

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					sensible useful model that was agreed and accepted across the international statistical community – it saves them work, gives them the benefit of more wisdom than they can muster individually, and will probably provide a focus for shared tool development. Because of this the NSIs have generally been very supportive of the SDMX concept at OECD, UN, Eurostat, and other meetings over recent years, They are now underwhelmed by SDMX because the presentations in recent meetings have focused on technical aspects, making SDMX appear very much in a tactical rather than a strategic light. This has been exacerbated by the perception that SDMX is unduly influenced by GESMES (which the NSIs generally regard as being not strategic and of very limited use). In the context of SDMX Version 1 the perceptions generated are probably about right. But SDMX Version 2 is very much more the strategic option that the NSIs have been seeking. But the presentation of SDMX has not changed to reflect this maturity. Presentations still		

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					focus on data exchanges and often feature screens of XML (with not much context to make them in any way understandable). I think we need to look at and talk about SDMX in a quite different fashion. The key parts - the parts that will make NSIs see it as a potential solution to a strategic problem - are not the data representation and data exchange elements. The key parts are the conceptual model for managing, publishing, and sharing metadata - concepts, category schemes, classifications, code-lists, structure definitions - in a way that makes it directly referencable and usable, the standards for describing and storing metadata and data, the standard interfaces for registering, querying, and exchanging them, and the basic set of tools that supports these activities. In a sense the actual representation mechanisms for time series and tables are a minor add-on - one could equally well define representation mechanisms for statistical unit data, for environment data, or for		

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					drugs and chemicals and get major benefits from having them defined in a well-designed shareable metadata context. We need to ensure that the presentations on SDMX present it in this strategic light, emphasising that, with this framework to work within and build on, we can start agreeing and sharing metadata content, leading directly to the current work on content standards. Note that while the conceptual model is critical, presenting it in UML must be avoided - almost none of the people in NSIs (or any other organisation) who are interested in strategic matters will have or want any understanding of UML. This leads us directly to planning and developing the presentation packages. We need to plan a structure and construct content and get reality checks from a few agencies and individuals that have shown interest in the topic. It can then be presented in a variety of ways - posters, web pages, powerpoints, papers. But we need to make sure that the underlying structure and theme of the message is		

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					preserved whatever the medium		
1	FRB	San Cannon	SDMX-ML Schema and Documentation	966	Why are codes restricted to be of type NMTOKEN? We have series codes that include the @ symbol which we'd like to maintain as code values.	Allow other characters besides those allowed for NMTOKEN. Type string might be too general so it may be better to define an intermediate class which allows more special characters.	Comment noted and agreed. The set of characters which will not produce other problems (in URNS and URLS) has been identified - a union simple type will be created to address this requirement.
2	FRB	San Cannon	SDMX-ML Schema and Documentation	2167-2712	Dating of observations at the beginning of the period: For some frequencies (e.g. quarterly), it is arbitrary and misleading to assign the first month of the quarter to the quarterly value. For stock data, it is just plain wrong: series which are measured at the end of period CANNOT have the first month of the period as an arbitrary date specification. For some frequencies, the measure is explicitly NOT the beginning of the period. We publish many interest rates that are Wednesday observations, yet this restriction forces us to date ALL weekly data with a Monday date.	Allow dates at lower frequencies (quarterly, half year); drop restriction that observations are dated at the beginning of the period.	Comment noted. The union type incorporating both dateTime/Year and an ability to indicate when annual, semi-annual, and quarterly periods are meant, using a notation like "Q1" for "first quarter", will be provided.
1	FED	Paul Asman	SDMX Framework	289	There is an implication that version 1 did not allow the publication of reference	My understanding is that Version 2.0 explicitly supports not	Agreed, the wording will be adjusted.

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					metadata. FRBNY published reference metadata in version 1-compliant SDMX representations, and I hope that the way we did so is compatible with version 2 even if not optimum.	only the publication …. but also the reporting. I would change the emphasis from allowing to support for a standard, systematic representation of reference metadata.	
2	FED	Paul Asman	SDMX Framework	443f	The first two sentences of the paragraph are limited to data, in a paragraph that otherwise explicitly couples "data and reference metadata." Shouldn't the first two instances of 'data' be 'data and metadata'? And shouldn't it be the more general 'metadata' in this paragraph, to cover structural metadata as well?	Couple metadata (to cover both structural and reference) with data at the start of the paragraph.	Agreed, the wording will be adjusted.
3	FED	Paul Asman	SDMX Framework	465	It is my understanding from the previous part of 3.4 that each data provider has its own registry. Is this correct? If so, talk of "the registry" strikes me as having the misleading implication that there is one central registry.	I had thought that there would be a central registry. Should this belief have been held by others as well, it may be helpful to state explicitly that there is no central repository. On line 465, I'd change 'the' to 'a'.	Agreed, with the qualification that centralized registries within particular statistical communities may be a very common use of this technology. The text will be adjusted in line with the spirit of this comment.
4	FED	Paul Asman	SDMX Conceptual Information Model:	470	Organizations can be part of organizations – the New York Fed is part of the Federal Reserve System, the BIS is part of SDMX, and so on.	It might be good to express the association that the class Organisation can have with itself (as with code et al.), esp. for	Comment noted and agreed. Appropriate changes will be made.

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						maintenance agencies that have their authority due to underlying organizational members.	
5	FED	Paul Asman	SDMX Conceptual Information Model	975	This part of the Information Model describes key family extension, about which I see nothing in the Implementers' Guide. This is an important topic for the New York Fed.	Will key family extension be described in a new version of this section?	Comment noted. Extensions are supported in 2.0, and the Implementors Guide will be updated to reflect this.
6	FED	Paul Asman	SDMX Conceptual Information Model:	1071	On the schematic, why is Item Scheme represented twice, rather than once with an arrow drawn from Item to the (one instance of) Item Scheme?	Eliminate one of the Item Scheme boxes?	This is done for clarity.
7	FED	Paul Asman	SDMX Registry Interfaces	266	In this line, it's "an SDMX Registry." Previously and subsequently, it's "the SDMX registry." At 773, there is talk of "one or more," implying multiplicity. But it's not clear to me whether there is one or more than one logical registry.	Make explicit whether there is one or more than one logical registry. Perhaps say something about who (e.g. maintenance agencies) is expected to create and maintain instances of the registry. The nature of the "whole registry" (lines 493 and 524) should also be explicit.	The registry specification does not address the deployment of registries. As per comment 3 above this will be clarified in the Implementors Guide.
8	FED	Paul Asman	SDMX Registry Interfaces	487	I do not see a process description of how a maintenance agency becomes an "authenticated maintenance agency."	Explain authentication process in this document, or provide a reference to the process in another document.	Comment noted. A technical specification does not dictate what operational policies users may

No.	Organisation	Name	Document/ Standard	Line No.	Problem/Issue	Suggested Solution	Disposition
							implement.
9	FED	Paul Asman	SDMX Registry Interfaces	528f	Structural metadata items can only be maintained and deleted by the agency that created them. But what if a maintenance agency goes out of existence? What if a maintenance agency no longer wishes to associate itself with an item it created that is used by others?	Can there be a provision to transfer ownership of items, with the owning rather than creating agency responsible for them?	This is an operational issue. See comment in 8 above.
10	FED	Paul Asman	SDMX Framework	656	version 2.0?		Agreed
11	FED	Paul Asman	SDMX Framework	667	I would find it helpful to have an example of an ICS. I do not find one in the collection of examples, R3_DOC03B.		Comment noted. This is being given consideration although this may not be possible in the current version of the specification.
12	FED	Paul Asman	SDMX Framework t	740-742	'EDI' and 'ML' seem to be reversed in one set of clauses		Comment noted. Fixed.
13	FED	Paul Asman	SDMX Framework	945f	When will the framework be created? Who will hold the keys? What will be the mechanism for updates suggested from outside SDMX? What is the connection between the framework and the registry, if any? This framework is quite intriguing, and I'd like to know more about it.		Initial drafts of these content standards are being prepared. The SDMX initiative sees itself as fostering these guidelines in an open process.
14	FED	Paul Asman	SDMX-ML Schema	3106	While I understand the virtues of NaN, it is not the only workable solution to missing observations. Nil works as well, and strikes me as more	Allow nillability to be set to true in schemas (this may be the case now, but is not supported by the tools), and allow nil	Comment will be considered, but this proposal may have re-percussions on the use of many

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					accurately reflecting the facts.	to be set to true in the observation.	commercial and generic XML tools, which do not support xsi schema functions (of which nillability is one. Also, nillability does not work in some of the schema bindings (the ones using attributes rather than elements).
15	FED	Paul Asman	SDMX-ML Schema	3556	It is not clear to me why all attributes and dimensions become optional in a cross-sectional representation. Shouldn't we be able at least to make dimensions required?	Permit attributes and dimensions to be required in cross-sectional representations.	The reason why they are all optional in the cross-sectional schema is that they *may* appear at different levels, but *must* appear at one of the levels available. Schema does not support the expression of this logic.
16	FED	Paul Asman	SDMX-ML Schema	412	I don't understand what it makes to have cardinalities on both ends of an association drawn with an arrow (from CodedArtifact to ItemScheme).	Either this is a result of my unfamiliarity with UML or should be changed.	Even though the arrow indicates that the association is navigable only in the direction of the arrow, it nevertheless is good practice to show the cardinality at the non-navigable end of the association.

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17	FED	Paul Asman	SDMX Implementors Guide	1984, 1986	What are the ranges of the frequency values 'business' and 'event'?	Publish an authoritative code list for frequency, with explanations of its values.	This will be addressed in the draft guidelines for the Cross-Domain Metadata Concepts standard.
18	FED	Paul Asman	SDMX-ML Schema Samples	Various	What is 'agency' for the structure elements concept and KeyFamily is 'agencyID' for the codelist element.	Use one for concepts, key families, and code lists. 'Agency' is backwardly compatible with version 1, while 'AgencyID' is not.	These will all be made consistent for version 2.0.
19	FED	Paul Asman	SDMX-ML Schema Samples	Various	Many of the new features of version 2 are not used in the samples (e.g. hierarchical code lists and incremental intervals).	Include samples that use the new features of version 2.	Agreed. Additional samples will be forthcoming either with the specification or as supporting documentation.