

# TeamRoom Plus

IBM TeamRoom

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## Meeting about Meetings\OGF

Project	DFDL 1.0
Meeting Date	11-Dec-12 (Tues)
Meeting Time	15:00 - 16:00

Created by Steve Hanson on 09-Mar-11

Last Modified by Steve Hanson on 12-Dec-12

## OGF DFDL Working Group Call , 11 December 2012

### Agenda

**Prepare** for your meeting by describing the objectives (both immediate and long-term, if appropriate) of the meeting; and describe key plan details.

#### 1. Daffodil Open Source Project

Status.

#### 2. Errata 2.100 revisited

Mike has found a format where the unparsed length of elements must be based on the unpadded length of the longest element. This requires that a calculation is performed external to the unparse , and the length passed in as an external variable. Each element is then padded to that length. However that won't work because of errata 100 which said that when lengthKind is 'explicit' and the length is an expression, the data is treated as variable length, not fixed length. Steve has resent the two emails on this.

#### 3. Errata 2.95 and 2.107

Need to revisit 2.95 in the light of 2.107. The insistence of aligning text on an 8-bit boundary won't work for the 7-bit ASCII text encoding described by 2.107. There are also likely to be other text encodings that use 7-bits or less (for example, Baudot and Padded Baudot).

#### 4. UCS-2 references in spec

This encoding is mentioned but it is not in the list of IANA encodings nor is it a CCSID .

#### 5. Clarify use of term 'scanning' in the spec

Ensure that the Glossary and elsewhere are clear when they use the terms 'scanning' and 'delimiter scanning'.

#### 6. How to provide a way for DFDL expressions to handle characters that XML disallows

Mike has a proposal for a new DFDL function that allows a DFDL character entity to be used in a DFDL expression . For example, want to add a NUL character onto the end of a string - can't do that using native XPath 2.0.

#### 7. Errata 3.18 and renaming dfdl :representationLength and dfdl :unpaddedLength

Given the clarification in errata 3.18 of the terms representation, content and value, should these functions be renamed?

#### 8. AOB

## Minutes

### Meeting Minutes

**Reflect** on your meeting as you record all topics and issues discussed , and any tabled conversations . What went well, or what would you do differently next time ? Document those so others can take advantage of your learning .

#### Attendees

Mike Beckerle  
Tim Kimber  
Steve Hanson

#### Apologies

Suman Kalia

#### Minutes

##### 1. Daffodil Open Source Project

No update.

##### 2. Errata 2.100 revisited

Not discussed.

##### 3. Errata 2.95 and 2.107

The insistence of aligning all text on an 8-bit boundary won't work for the 7-bit ASCII text encoding described by 2.107 and there may be others in the future. Mike to write a proposal as to how alignment and text should work together (must cover all places that encoding is applicable , so text data values, delimiters, asserts with testKind 'pattern'). New **action 196** raised.

##### 4. UCS-2 references in spec

This encoding is mentioned but it is not in the list of IANA encodings nor is it a CCSID . Agreed that it should be used in the spec, and sections should be updated accordingly . **Errata taken** .

##### 5. Clarify use of term 'scanning' in the spec

Ensure that the Glossary and elsewhere are clear when they use the terms 'scanning' and 'delimiter scanning'. **Errata taken** .

##### 6. How to provide a way for DFDL expressions to handle characters that XML disallows

Mike will send a proposal for a new DFDL function that allows a DFDL character entity to be used in a DFDL expression. New **action 197** raised.

##### 7. Errata 3.18 and renaming dfdl :representationLength and dfdl :unpaddedLength

Given the clarification in errata 3.18 of the terms representation, content and value, these functions should be renamed dfdl:contentLength and dfdl:valueLength respectively , and their descriptions clarified. **Errata 3.18 will be updated** .

#### Meeting closed

15:50 UK

#### Next call

After Christmas break - Tues 8th January 15:00 UK

Record the to-do's and individuals assigned by entering the appropriate information in the form below . Press the "Create Action Items" button to create specific to do's that can be tracked in the assignee's Work for Me views. " All Action Items will be tracked in the Action Items and Other Meeting Documents tab .

#### Action Items and Other Meeting Documents

Subject	Document Type	Created	Modified
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Next action: 198

#### Actions raised at this meeting

No	Action
196	<b>Update errata 2.95 to handle encodings that are less than 8-bit (Mike)</b> 11/12: Mike to send new words for errata 2.95 that cover all aspects of this.
197	<b>Define a new DFDL function to allow DFDL string literals in expressions (Mike)</b> 11/12: Mike to send description of a function that is the mirror of <code>dfdl:stringLiteralFromString</code> .

#### Current Actions :

No	Action
123	<b>DFDL tutorial (Steve)</b> 13/10: Draft of first 3 chapters has been written and will be distributed to WG 10/11: Posted to grid forge here ( <a href="http://forge.gridforum.org/sf/go/doc16106?nav=1">http://forge.gridforum.org/sf/go/doc16106?nav=1</a> ), work continuing at IBM to define a standard example-based chapter framework and to author additional chapters. Contributors welcome! 17/11: Steve, Stephanie and Alan had a meeting to discuss the best structure for the tutorial and decide which examples to use throughout. The meeting raised more questions. Further discussions will be held. 24/11: The list of topics to be covered in the remaining lessons has been produced and a

lesson template. Alan will write lesson 4

01/12: Alan has started lesson 4 which covers fixed and variable fields and arrays .

08/12: Alan has almost completed lesson 4. Will send out for review.

15/12: First draft of lesson 4 is available for review. Alan to send to Bob and Joe.

22/12: Alan has distributed drafts for tutorials on Basic Structure and Optional/Repeating elements. Please review

12/01: Alan distributed a tutorial for choices and updated the others. Alan and Steve reviewed them and updated versions will be sent soon. Should start on the 'representation' tutorials soon.

19/01: The tutorials for basic structure, optional/arrays and choices have be updated. Please review. The tutorial for text elements should be available soon.

26/01: No comments received about 3 tuorials distributed last week. Alan is still working on Text representation.

02/02: Steve has sent comments on three tutorials. Alan to send updated versions by the end of the week. Alan has also distributed the first part of the tutorial on text representation and would like feedback.

09/02: Steve had reviewed tutorials 3,4,5 and updated versions have been distributed. Joe reviewed lesson on text elements.

Main points. Using 'represented as text' is confusing. Examples are too cluttered. Suggest simple targeted examples but still build up to final complete schema

23/02: New versions distributed and Steve has commented.

02/03: Alan has published the final versions of tutorials 4,5,6 and is working on text respresentations. There was some discussion about the detail that needs to be covered. Should limit it to 'common usage' and refer to the spec for details of edge cases.

09/03: Alan distributed an update to the text tutorial. Please review.

30/03: Steve has spent half a day tidying up lessons 1 to 6 and has uploaded them as pdfs to gridforge. They are now more coherent, and many inconsistencies and errors fixed. Ownership of draft lessons (text properties, binary properties, advanced features) has been passed to Steve. Also need to make a schema available for the examples.

13/04: Steve is working on the text properties tutorial.

04/05: No progress

...

15/06: This is on hold until Steve clears up spec issues and other workload. Steph has looked at the later lessons, and noted that they are more direct compared to the more wordy earlier lessons.

28/06: On hold.

...

29/11: Tim offered to take a look at the next outstanding tutorials. Steve / Tim to discuss

6/12: No progress

...

10/01: No progress, offer from Mike to help. First step is to make any corrections due to errata.

17/01: No progress

24/01: No update

31/01: Daffodil project team will be working their way through the existing tutorials and reviewing

14/02: Daffodil team to start reviewing tutorials hopefully this Friday.

21/02: Moved to this coming Friday

28/02: No update

13/03: No progress

21/03: No progress from Daffodil team. IBMers are starting to use the tutorial and will feedback any comments.

28/03: No change

05/04: Steve will send Alan's two draft lessons on binary & text data to Mike to complete.

17/04: No progress

8/5: No update

...

4/9: No progress:

	<p>11/9: IBM DFDL infocenter will start to reference these directly before the end of the year , so they need updating soon.</p> <p>18/9: Noted that several requests have been received asking for chapters 7 to 17 as implied by chapter 1. At minimum chapter 1 needs updating to make it clear what exists today.</p> <p>28/9: Steve has updated and re-issued chapters 1 to 3.</p> <p>...</p> <p><a href="#">11/12: No further progress</a></p>
140	<p><b>Spec issue : Parsing: 'missing' v 'empty', role of initiators , default values (All)</b></p> <p>01/06: See minutes.</p> <p>08/06: Still under discussion. Tim has sent Mike a selection of data formats to guide the discussion.</p> <p>15/06: Not discussed - an extra call has been scheduled to go through this.</p> <p>28/06: A series of extra calls are being held between Mike, Steve, Tim and Steph.</p> <p>05/07: Next extra call is Wed 6th July - Steve to send invite</p> <p>12/07: Two more calls held. Next call is Wed 13th July.</p> <p>19/07: More calls held, next call is Fri 22nd July.</p> <p>26/07: More calls held, good progress</p> <p>16/08: Steve will set up next call for when Tim has returned from holiday</p> <p>23/08: Two more calls scheduled for this week, remaining issues: separator suppression, empty strings, sparse arrays (see action 136)</p> <p>30/08: Call held earlier today. Still remaining - separator suppression (matrix); sparse arrays; empty strings; empty value delimiter policy. Steve to summarise where we have got so far before remaining items are tackled.</p> <p>20/09: Steve has summarised where we are with action 140, which Tim and Mike have reviewed. 2 hours call planned for Thursday.</p> <p>27/09: Calls held, progressing the separator suppression behaviour</p> <p>4/10: More calls held, progressing separator suppression, sparse arrays (see action 136) and emptyValueDelimiterPolicy behaviour</p> <p>18/10: All issues now in a single document, call held earlier today. Next call Thursday.</p> <p>1/11: Extra calls still ongoing</p> <p>8/11: Extra calls still going, when action 140 document complete will send to Steph for review</p> <p>15/11: Mike is verifying the action 140 conclusions by writing an algorithm in SCALA which can be ultimately be used in Daffodil</p> <p>22/11: Call to be held next week</p> <p>29/11: Next call 30/11</p> <p>6/12: Next call 7/12</p> <p>13/12: Had call earlier today, making good progress. Next call first week of Jan.</p> <p>10/01: Next call to be scheduled for Wed or Fri</p> <p>17/01: No call last week, call tomorrow</p> <p>24/01: Two calls held, next call Wed, looking at separator suppression</p> <p>31/01: Separator suppression discussions ongoing, proposal to rename policy and enums. Call later this week.</p> <p>14/02: Now looking at separator suppression and unparsing. Next call on Friday</p> <p>21/02: Separator suppression on parsing/unparsing matrix agreed.</p> <p>28/02: Two more calls this week</p> <p>13/03: Call tomorrow</p> <p>21/03: Two more calls held</p> <p>28/03: Hopefully all issues now addressed. Steve to start folding in action 140 document comments into the body of the document.</p> <p>05/04: Still with Steve. Noted that action 140 will not be in the next spec rev, likely the one after.</p> <p>17/04: No further progress</p> <p>8/5: Steve has started rewriting the action 140 document</p> <p>23/5: Steve continuing the work on the action 140 document. Empty/missing/defaults and Arrays have been rewritten. Separators not started. Please review.</p> <p>12/6: Steve will resend the latest action 140 document for review. Note use of 'missing</p>

representation' to describe zero length input data with same semantic as missing altogether.

19/6: Latest action 140 resent. Separate call on Thursday this week.

26/6: Call held, revisions need to be made before action 140 can be circulated more widely.

Next call will be Tues 3rd July.

3/7: Steve not found time to update action 140 doc, call postponed to 10th July

10/7: Call held, document still being refined. Spin off **action 179** to sort out use of term 'representation' in spec and grammar.

17/7: No progress on core action 140.

25/7: No progress - Steve will aim to finish refinement before Aug 16

31/7: No progress

7/8: No progress

14/8: Steve has started to create v16 of the action 140 document and will mail it to Mike & Tim this week

4/9: v16 mailed to Mike & Tim - some issues noted in the email - Steve will set up a separate call

11/9: Separate call held. Re-examining the role of minOccurs for occursCountKind 'parsed', 'expression', 'stopValue'. For these occursCountKinds, where the occurrences are extracted without reference to minOccurs, it seems more natural that a minOccurs violation is not a processing error but instead it is just a validation error. Need to evaluate the knock-on effect of this proposal - it potentially affects points of uncertainty, default values, use of terms required & optional, and separator suppression.

18/9: Tim and Steve have worked through the proposal, it looks good in principle. Steve to update action 140 document and see if anything problematic surfaces.

Note that current definitions of 'required' and 'optional' retained - it's just that now a required element missing from the infoset (after defaulting applied) is not necessarily a processing error (that now depends on occursCountKind). Please review for next call.

28/9: Tim & Mike to review Steve's updated document. Other things to do before it can be incorporated into the spec:

- SMH1 comment: What do dfdl:xxlength() functions return when rep is absent? Error or 0?

- English words for separator suppression tables

- Decide the fate of Appendix A? Perhaps replaced by tutorials?

2/10: Key to explaining all this when it is rolled into the spec is defining the different reps plus 'missing' plus concepts of 'well-formed' and 'badly-formed' in the glossary. Clearly sections 13.15, 14 and 16 are affected in a major way, but it is likely that it affects several other sections such as 9.

Discussed the dfdl:xxLength() functions and what they should return when there is nothing in the infoset. This led to a more general discussion of whether a failure to find a path should be treated as a schema definition error or a processing error. New **action 188** raised.

16/10: Steve to take one more pass through the document in the light of the above, and also try to put into words the separator suppression tables. In order to do this need action 187 needs resolving.

23/10: Action 187 resolved far enough to allow Steve to proceed with document pass.

30/10: Still with Steve.

5/11: Still with Steve.

12/11: Steve has updated action 140 to v018 to reflect action 187 terminology, which has made it clearer. Next step is to create readable descriptions of the separator suppression tables.

20/11: No further progress. Consider making separator suppression stuff a separate action?

27/11: No progress

4/12: Steve has started work on the separator suppression policy descriptions. Key to this is a definition of 'potentially trailing' as this is one of the criteria that allows separator suppression to take place. Steve will circulate a draft definition as it is not as obvious as it appears. Also it is important that the WG re-review action 140 v018 as Steve believes there are inconsistencies in there.

A call may be scheduled later in the week if needed.

11/12: Steve sent out a v019 of the action 140 document which corrected some mistakes from earlier updates, added comments for issues that needed resolving, and contained a rewritten

	<p>section 4 on separator suppression. An extra call was held on 7/12 which addressed the comments and reviewed section 4. Actions arising were:</p> <ul style="list-style-type: none"> <li>- Mike to reword some of the section 4 text to make clear the distinction between a potentially trailing element and actually trailing occurrences of an element .</li> <li>- Steve to correct a mistake in the separator suppression tables where column headings got swapped and resend the spreadsheet</li> <li>- Tim to create some introductory words to explain the motivation for the separator suppression property</li> </ul>
172	<p><b>Clarify how a DFDL string literal is matched against the data stream (Tim)</b></p> <p>23/5: Non-trivial algorithm, worth stating it in the spec.</p> <p>..</p> <p>25/7: No progress.</p> <p>31/7: Tim has been making notes but nothing written up formally . Will include treatment of %WSP*;</p> <p>...</p> <p><a href="#">11/12: No further progress</a></p>
191	<p><b>Clarify if necessary what constitutes a schema definition error and a processing error (Mike)</b></p> <p>5/11: Following on from action 188, look at things like divide by zero , array out-of-bounds, and classify accordingly .</p> <p>...</p> <p>20/11: Discussed whether or not an appendix or section 2 is the best place for this information .</p> <p>27/11: No progress</p> <p>4/12: Mike has circulated a document that lists different errors . Suman suggested adding categories to group the different errors . Noted that action 188 had already defined what to do with XPath path-not-found and type-conversion errors . Agreed that it is desirable to have a unique code for each DFDL error, but that was not an immediate priority and should not hold up re-issue of the DFDL spec .</p> <p>Incorporated agenda item about implementation limit errors into this action item .</p> <p><a href="#">11/12: Mike still working on this .</a></p>
193	<p><b>Prescribe a single regex language or subset (Steve)</b></p> <p>12/11: Created</p> <p>20/11: Not discussed</p> <p>27/11: IBM DFDL intending to use Java regex for Java, and ICU C regex for C .</p> <p>Steve to contact ICU to find out any behavioural differences between ICU and Java .</p> <p>Need to decide default behaviour for configurable options like whether the wildcard character '.' includes line end characters, and case sensitivity, etc.</p> <p>4/12: Steve has raise ICU ticket to document Java and ICU4C differences, awaiting response .</p> <p><a href="#">11/12: Acknowledgement from ICU but not a full response as yet</a></p>
194	<p><b>Publish Errata v 011 and fold into DFDL spec (Steve/Mike)</b></p> <p>20/12: Steve has a draft of Errata v011 for review. Writing up the errata has revealed a clash between 2.95 (assumption of byte alignment for delimiters) and 2.107 (allow 7-bit ASCII encoding) so need to rectify this.</p> <p>27/12: Corrections made to Errata v011 and resent for review. Mike responded with comments . One comment led to some discussion, namely changes to errata 3.13 regarding replacement characters .</p> <p>Should encountering a decoding error when parsing variable length xs:string be an error or use the substitution character (like would be done for specified length xs:string) ?</p> <p>4/12: Given the imminent Christmas break it looks like incorporating errata v 011 into the spec might not take place until January . If so then hopefully action 140 might make it as well .</p> <p>Regarding the decoding issue Mike will have a go at rewording errata 3.13 .</p> <p><a href="#">11/12: Mike has rewritten errata 3.13. Proving difficult to find a sensible split between when to use substitution character and when to give a processing error . Need to revisit the requirements from consumers before deciding. Steve to check IBM guidelines.</a></p>

## Closed actions

No	Action
185	<p><b>ICU rounding behaviour (Steve)</b></p> <p>18/9: ICU to verify rounding behaviour for text numbers, Steve to propose any DFDL spec changes that result.</p> <p>2/10: No update from ICU yet</p> <p>16/10: ICU have updated the ticket but not yet completed the investigation</p> <p>...</p> <p>20/11: No update from ICU</p> <p>27/11: Update from ICU on ticket 442, they are investigating, Steve has asked for latest status.</p> <p>4/12: ICU have updated ticket, Steve has asked for a clarification, and assuming that is forthcoming will circulate a proposal for an errata for the DFDL textRoundingMode and textRoundingIncrement properties.</p> <p>11/12: <b>Closed</b>. Steve has sent out a proposal. Looks good so <b>errata taken</b> to update the spec.</p>

### Deferred actions

No	Action
129	<p><b>Press release to publicise DFDL (Steve)</b></p> <p>Steve is pulling together a press release at IBM. Want to include as many contributors and interested parties as possible. NCSA are keen to be included. Also likely that US National Archive will want to be included. Mike has indicated OCO are too.</p> <p>17/11: no progress</p> <p>...</p> <p>08/12: Still no response from IBM press office</p> <p>15/12: no progress</p> <p>....</p> <p>09/03: No progress</p> <p>30/03: Making this action deferred until IBM is in a position to say something more concrete about any implementation.</p>
131	<p><b>Transformation of DFDL properties to a canonical form (Joe)</b></p> <p>08/12: Joe has produced a XSLT to transform a DFDL schema to a canonical element form. When tested it should be made available on the WG gidforge site.</p> <p>15/12: Alan tested against test dfdl schema which worked correctly (after fixing some errors in the schema)</p> <p>22/12: no update</p> <p>12/01: Joe has some defects to fix before making available on gridforge.</p> <p>19/01: There is a difficult problem to solve before Joe make the style sheet public</p> <p>26/01: Working on problems</p> <p>02/02: no progress</p> <p>09/02: As it wasn't a simple as exoected this will be treated as a low priority action</p> <p>23/02: Low prioity</p> <p>09/03: Low priority</p> <p>30/03: Deferring for now</p>
066	<p><b>Investigate format for defining test cases (All)</b></p> <p>25/11: IBM to see if it is possible to publish its test case format.</p> <p>04/12: no update</p> <p>...</p> <p>17/02: IBM is willing in principle to publish the test case format and some of the test cases . May need some time to build a 'compliance suite'</p> <p>24/03: No progress</p> <p>03/03: Discussions have been taking place on the subset of tests that will be provided .</p> <p>10/03: work is progressing</p> <p>17/03: work is progressing</p> <p>31/03: work is progressing</p> <p>14/04: And XML test case format has been defined and is being tested.</p> <p>21/04. Schema for TDML defined. Need to define how this and the test cases will be made public</p>



05/05: Work still progressing  
 12/05: Work still progressing  
 02/06: Work still progressing on technical and legal considerations  
 ...  
 25/08: Will chase to allow Daffodil access to test cases. The WG should define how implementation confirm that they 'conform to DFDL v1'  
 01/09: IBM still progressing the legal aspect. Intends to publish 100 or so tests as soon as it can, ahead of a full compliance suite.  
 08/09: IBM still progressing  
 15/09: IBM still progressing, expect tests to be available within a few weeks  
 22/09: IBM still progressing, expect tests to be available within a few weeks  
 29/09: Test cases are being prepared.  
 06/10: Some test cases should be available next week. Steve would like to be able to show the test case information at OGF 30.  
 13/10: Still progressing  
 10/11: Legal issues cleared, IBM in process of collecting 100 example test cases, ideally ones that fit the 'extended conformance' of NCSA Daffodil  
 17/11: Work is progressing on verifying the test cases. It should be possible to distribute to the WG in 2 weeks.  
 24/11: About half the test cases have been completed and are being reviewed internally.  
 01/12: Test cases should be available shortly  
 08/12: The test cases are in internal IBM review. Probably need a bit of reorganising before publication  
 Stephanie gave a brief overview of the format of the test cases.  
 15/12: Ruth joined the call to provide the latest status. The test cases have been updated and a draft read.me produced. Although not ready for public distribution Ruth will send them to Joe for feedback.  
 22/12: Test cases were sent to Joe for initial testing which found some problems in the Daffodil parser  
 12/01: All current tests use a default format which Daffodil doesn't currently support. Joe suggested that there should be test that defined the same function using different definition forms. Also suggested that default formats should be provided by the WG. This had always been the intention. Action 133 raised to track.  
 19/01: There is currently no resource available in IBM to make more tests available. IBM to discuss how/if it can make a 'minimal compliance test suite' available.  
 26/01: Action kicked off within IBM. There was a brief discussion about naming and organisation of test cases but no preferences were expressed  
 02/02: IBM will not have the resources to develop a full test suite in the near future. Steve suggested that we produce a list of required test cases so that anyone could supply them.  
 09/02: Steve had previously sent a list of areas to be tested. Please review.  
 23/02: Please review Steve's list of areas to be tested  
 02/03: Alan had reviewed Steve's list and we went through his comments. Agreed there is no need for separate tests for the info set or for dfdl: property lists, unions etc but comment will be added that these should be exercised during property testing.  
 09/03: Alan updated the test document. Need more introduction and perhaps adopting the OGF template.  
 30/03: Ownership of test document passed to Steve. This action is merged with 112 and will cover all aspects of compliance suite.  
 13/04: IBM will not have time to create a compliance suite in the near future. Probably best to make this action deferred for now.  
 ...  
 10/07/2012: Discussed schemes to create interchangeable tests. Ideally need a DFDL defined error code per failure, in conjunction with specific inserts.

## Work items:

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No	Item	Owner	Target	Status
043	Track errata list for 1.0 of the spec. <a href="http://forge.gridforum.org/sf/go/doc16280?nav=1">http://forge.gridforum.org/sf/go/doc16280?nav=1</a>	Steve	N/A	Draft 010 on grid forge.
044	Incorporate errata list into DFDL spec.	Steve/Mike	N/A	Draft merged document.