2004-02-10 WSDM TC Face to Face Meeting Minutes

Agenda

- 8:30am Welcome/Attendance
- 8:30-11:30 MUWS Metrics
- 11:30-12:30 MUWS Specification, roadmap for completion of 0.5
- 12:30-1:00 Lunch
- 1:00-2:00 - MOWS Review and Issues
  - Handling the Request State Model
  - Versioning
- 2:00-4:00 - WSDL Mapping from UML
- 4:00-5:00 - Specification Roadmap
  - LineItems for WSDM Spec 1.0
  - WSDM Spec 2.0
  - Action Item Review and assignment
  - Editor Coordination
  - Subteam Coordination (if any)
  - Plan for next Face to Face - Islandia in April?
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- Tuesday 5-6 - interoperability implementation details/logistics

Action Items

Assigned To	Date Due	Action Item	AI ID
Andreas and Richard	27 February	Metrics – draft from today's discussion.	20040210-A
Igor and Fred	18 February	XML for Metrics.	20040210-B
Andreas and Richard	27 February	UML for Metrics.	20040210-C
Richard	27 February	Operations for Metrics.	20040210-D
William.	27 February	Discovery Section of MUWS Specification. Say to use the same mechanism you use to discover Web Services.	20040210-E
Michael	20 February	Update Versioning UML and supply text to go along with it.	20040210-F
Winston	11 February	Upload Work Register 1.2 to WSDM site.	20040210-G

Assigned To	Date Due	Action Item	AI ID
Igor	20 February	Revise MOWS 0.5 specification and upload as Draft. Include comments discussed, such as Service Time definition and Total Requests not necessarily the sum of Faults and Success.	20040210-H
Heather	18 February	Write text to explain the relationship of the Counters in 0.5 to the W3C Request Processing State. Send to Igor.	20040210-I

Motions

- Official Motion – Approve this Work Register between DMTF and WSDM. Approved unanimously.

Summary

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Meeting Notes

- 8:30am Welcome/Attendance
- 8:30-11:30 MUWS Metrics
  - Metric Organization – sets?
  - Metric Meta data – Units, ...?
  - Metric Events – Metric change?
  - Went through the Metrics framework submitted by Warren.
  - Discussed the Definition of Metrics.
  - What Metrics for 0.5?
    - Three counters, each has a time stamp associated with it, when the counter started its collection.
    - TotalServiceTime.
    - Meta Data – use DMTF Metrics Ontology – need the change type and time scope.
    - Each Metric has a value, a time stamp, and a set of meta data (two items).
    - How to represent this using WS-Resource Properties?
    - Fred – Top Level schema – State, Identity, Sequence of type Metric. So the meta data would be associated with type Metric.
    - Tom – it is a schema, not an instance. Schema people have said that meta data doesn't go into the schema. Do you want to search at design time to find resources that are counters and not

resettable? If so, this doesn't help. Design time meta data (rw/ro) v. run time meta data.
    - For 0.5, if we decide to put it in the Schema, note that it is a tactical decision.
    - Decision that we don't need a separate category called Derived Metrics.
    - Bottom line is that these are Usage Hints.
- What Metrics Operations for 0.5?
    - Do we need Reset? May only need to reset related groups of metrics (like TotalServiceTime, Total Requests, Total Responses, Total Faults).,
        - Could just implement Reset for the whole Web Service.
        - And require that the Metrics be subordinate to the Reset Clock.
    - Do we need a start and stop time to calculate rates? How do we know what the current time is? Tom noted that OGSI 1.0 had lifetime for every property (Good from this time until this time) as well as (available from this time until this time). It was essentially extensibility for additional data related to metrics. Could use this approach. Winston brought up the "interval" property. Interval is relatively easy to calculate.
    - Do we want to define a Metric Set that includes TotalServiceTime, IntervalTime (since last update), TotalRequests, TotalResponses, TotalFaults?
- Agreements for 0.5
    - Metrics: Total Requests, Total Responses, Total Faults, Time Since Reset, Current Time.
        - CurrentTime in WSRF Lifetime. Web Service associated with the resource must have an idea of the current time. Should we use that
    - Operations: Reset (it resets all counters to 0 and sets Time Since Reset to current time).
        - Discussion of whether a Group Reset is useful for 0.5, introduces complexities we may not want yet. Thus, Time Since Reset would apply to every metric.
        - Note that we don't know if we want to reset metrics when the resource restarts.
        - Winston noted that once you have multiple managers using the manageability capabilities of one resource, you can't rely on the manager knowing when the last reset was.
        - Fred noted that the counters may or may not be impacted by starting and stopping the resource. So you need a Reset operation.
        - Richard noted that we can say that a Reset operation on a group of counters, it would have to Reset each individual counter. This would require a timestamp for each counter.
        - Yes, there are stupid ways to reset individual counters.
        - John noted that you need to be able to ReInitialize some counters.

- ResourceState: As Is.
- Require a TimeStamp in every manageability response (optional).
  - Discussion about whether it is needed. Tom noted that Containers won't like this. Michael noted that there may not be usefulness in getting the current time with every single response.
  - Heather noted you could have a Current Time metric that you can Get.
  - Richard and Fred noted that it is more important to have time stamp for "here is when I processed your request" or "this is when the property last changed".
  - Ellen noted that Events are time stamped. Other requests are synchronous.
- Dropped Total Service Time. Time Since Reset is the same without Resets.
- MUWS
  - Metrics are Resource Properties.
  - Schema for Metrics.
  - Timestamp in base metrics.
  - Reset operation in base metrics.
- MOWS

- Discussion of what to put into 0.5.
  - Ellen noted that we have to address how the manageability capabilities will be used, to determine if they make sense to include in 0.5.
  - Tom noted that you can have Open Attributes on each of the Elements. Doesn't change the structure of the document. Down side is that you only have simple types.
  - Tom said that WSRF returns the complex type. Could have a Query set up.
  - Reset options.
    - Option 1 – ResetAll only.
    - Option 2 – Reset for each metric only.
    - Group voted 12 for Option 1, 4 for Option 2.
  - Metrics as Complex Types.
    - Option 1. Make metrics as a complex type, always get that complex type when you do a WSRF Get.
    - Option 2. Two properties, TotalRequests and TotalRequestsResetTime
    - Option 3. Use Open Attributes -
    - Question: Should a Get request on a metric return all the information associated with it, like Value and ResetTime. Or just return the Value for that Metric.
      - 12 voted for return a complex type. 2 voted for just the value. Thus, for 0.5 will always return a complex type.
    - Discussion of how to implement. Should it be a Complex Type, or use Open Attributes. Strong Complex Types are easier to serialize. Complex Types that have Any in them make it

difficult for the consumer.
    - 3 choices.
        - 1) xsd element. (add your own attributes to it without defining a new element).
        - 2) new type. Within that new type and defining a set of attributes, and maybe also Open Attributes (an extension of xsd element).
        - 3) define a type with ##Any in there. Can define the schema as a complex type, but some current tools figure they don't know what is in there when they see ##Any.
    - Fred proposed 2, including Open Attributes, and restrictions on certain types.
    - Igor noted that with Open Attributes, you have to have semantics on why certain things appear and when. A Type is very crisp. Tom agreed, but noted you get rid of unwanted data this way. Igor said you can have optional attributes in the complex type. Larry noted that it can be easier to have all the information in one place – making them all elements, even if optional. Tom noted that the element model is easier to understand, and easier to serialize, but from a platform view, like WSRF, there may be issues with extensions to xsd element.
    - Tom noted the best thing to do is run it through WSDL to Java. Igor said we don't need to do that for 0.5.
    - Is the issue mainly how you define it in the specification?
    - Igor noted that MUWS Metric will be a simple type, an extension of Any type with two attributes. Restriction on value to be integer. The issue is how it works in the schema. So maybe we should run them through schema validators and see what happens.
        - Heather noted that we should decide at the next call.
- 11:30-12:30 MUWS Specification, road map for completion of 0.5
    - Architecture Section. See action items.
    - Need to publish it as Committee Draft on 31 March.
    - Final Draft due 24 March for Committee review.
    - Update the Architecture items by next week.
- 1:00-2:00 - MOWS Review and Issues
    - MOWS Specification 0.5, Road map.
        - Remove Configuration.
        - Remove the State section, because MUWS Resource State is sufficient.
    - Handling the Resource State Model
        - Is MUWS ResourceState sufficient? Do we need to add sub-states like Busy and Idle? Or Stopped v Crashed? (0,5 it is sufficient.)
        - Discussed how manageability provider indicates what states and sub-states it supports.
    - Handling the Request State Model.
        - Showed the Resource State Model. Need to have events associated

with transitions, for 0.5 have counters of the three states (not Processing).
    - Put the Section 2.2 for Resource State in the 0.5 spec to explain the three counters we are using in 0.5. AI on Igor and Heather (text). Agreed to put it in an Appendix.
- Versioning
    - Michael presented the new version document and UML diagram. Note that this is not needed for 0.5. It requires that a Revision contain the versions for each of the four things: service, endpoint, interface, documentation. Discussed that there is only one data type called Version, not four separate ones for each component. Agreed to that.
    - Need to follow up on the exact model.
- Remove Configuration section.
- MOWS Metrics. Igor showed angle brackets.
    - Tom noted that might not want xsd:DateTime, have more information in the WSRF date time semantics.
    - Igor added ChangeType and TimeScope. There was discussion whether it goes into the EndPointMetricsProperties schema or the type that gets returned.
    - Discussion of having a complextype called "Counter".
    - Similar to CIM qualifiers – very good reason to not make them types.
    - Needs to be available on request.
    - Do we want to have a collection of Base Data Types you use for the metrics. One for integer counters, one for decimal counters, etc.?
    - Fixed up the angle brackets to match WSRF.
    - Discussion of few properties with lots of descriptive data v. model with lots of properties (such as CIM).
    - Will have to do WSRF Resource Properties correctly. But not necessarily in the Specification. We will need to put an example in.
    - Added Service Time metric. A counter.
    - Faults do not necessarily mean failures.
    - Let the Web Service / Manageability Provider determine whether a request was successful or a failure.
    - Does the TotalRequests = Successful Request + Failed Requests. AI – Igor. Add wording that TotalRequests should equal the sum, but may not. This becomes more obvious when looking at the W3C Request State.
- DMTF-OASIS Work Register
    - Winston displayed it on the screen.
    - Noted that 1.2 has added the liaison to Behavior and State for State discussions.
    - Winston to be liaison to Server Management
    - Tom Maguire, liaison to Utility Computing WG – chair of Utility Computing.

    - Karl to be liaison to both Behavior and State WG as well as Application WG.
    - Jim brought up the Interoperability WG. The output of MUWS being used by Interoperability WG. WBEM Interoperability WG was already in the document. Andrea volunteered to be liaison to the WBEM Interoperability WG. Andrea added that one line to the Liaison section.
    - Official Motion – Approve this Work Register between DMTF and WSDM. Approved unanimously.
    - Winston will post this to the WSDM site.
- 2:00-4:00 - WSDL Mapping from UML
    - Covered in previous angle brackets.
- 4:00-5:00 - Specification Roadmap
    - Line Items for WSDM Spec 1.0
    - WSDM Spec 2.0
        - Can we decide what goes in here yet, or do we have to get a better idea of 1.0 first?
    - Action Item Review and assignment
        - Went through them.
    - Next Conference Calls.
        - No call this Thursday (two days after F2F).
    - Editor Coordination
        - Most editors left early.
        - Try to set up an Editor's call. Tentatively Tuesday slot we used before.
    - Subteam Coordination (if any)
    - Liaison Coordination (if any)
    - Plan for next Face to Face - Islandia in April?
        - Week of April 12?
        - Will talk about schedules next Conference Call to decide – AI on all.
- Sincerely thank Jim Willits and HP for hosting the F2F. Unanimous.
- Motion to adjourn. Passed unanimously.

END OF MEETING.

Follow up Meeting. Tuesday 5-6 - interoperability implementation details/logistics.

- Discussed what is needed.
    - Clients should be provided by the Web Services providers.
        - Clients should submit successful requests.
        - Clients should submit requests that will return a fault.
        - Should have more than one client per Web Service being used and managed.
    - Nice to have a neutral party with a Web Service that is manageable in some way. MITRE is a neutral party. MITRE would provide a Web

Services endpoint that is managed via MITRE developed manageability provider.
    - Would MITRE provide the Web Services endpoint (code) to others who want to make it manageable?
- What mechanisms do we want to make WS manageable?
    - Web Service made manageable by itself.
    - Web Service made manageable by the WS Execution Environment.
    - Web Service made manageable by an Agent / Proxy.
    - WSDL document needs to be provided via a URL. URLs sent out of band. URL has to be accessible via the Internet, as well as the Business service.
    - When Manageability Provider returns a Resource State of Unavailable, it is only because the Web Service being managed stops successfully processing requests. (see scenario of Web Service going down).
- What do Managers have to supply or do?
    - Agreements
        - Poll every 15 seconds. (Applies only to Resource State and Metrics.)
        - Manageability Provider should respond in 5 seconds.
    - First step – read only
        - Consume and display the WSDL provided.
        - Consume and display Identity.
        - Consume and display Resource State.
        - Consume and display Metrics.
        - Consume and display MOWS Identification.
        - Note: The Manager displays should change as the Metrics or State change.
        - Calculate average response time and display, it changes over time.
        - Calculate % failures, optional.
        - Let managers display any interesting derived/calculated information they want.
    - Second step – one or more Web Services go down, using proprietary methods.
        - Managers display that the Web Service went down, after polling for Resource State.
        - Managers display that the Web Service went back up, after polling for Resource State.
    - Third step – the “internal manager” for that Web Service performs a ResetAll. Only one manager is allowed to be the “internal manager”.
        - All managers display reinitialized metrics.
- Test managing