## Framing the moves and choices

| **Element** | **Descriptive and normative questions** |
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| (A.1) Imposing their own coherence and values on a situation | * *What coherence is the practitioner imposing on the situation?*

A strong faithfulness to the pre-planned set of structures and formalisms (tags, templates, etc.).* *What values is the practitioner imposing on the situation?*

In this case the practitioner was straddling multiple values. Primary was accomplishing the needs and planned agenda within the very tight timeframe, and producing the expected materials with sufficient clarity and quality. He also had a strong research interest in the way the tools were working for the purpose, both individually and together, and made observations to this end.* *In what ways are these congruent (or not) with those of the participants?*

These were mostly quite congruent with the participants, although they probably placed proportionally more value on the science aspects than the tool aspects. |
| (A.2) Constructing narratives to account for how the situation arrived at the current pass / breaches in canonicity  | * *What is the narrative the practitioner is using to construct the situation?*

Aside from the specific set of narratives corresponding to the idea of supporting the RST in working with the hab crew, there was also the idea of emerging tools and ways of collaborating using the tools, that the session was one of an unfolding story in which ‘proven’ aspects of the tools and techniques met ‘unproven’ and new ones, with an expectation that surprises and lessons would emerge from the act of using the tools and techniques in this manner and for this purpose. * *What is its degree of internal consistency?*
* *How useful is it?*

A high degree of pragmatism (can-do spirit even in the face of so much subject matter and tool complexity) characterized the proceedings and the practitioner’s actions, guided by the consistency of purpose. Although at times some of the infrastructure of pre-planned formalisms and the complexity of the automatically-generated science data appeared to slow things down somewhat.* *How evocative and inclusive is it?*

Given the wide range of issues, subject matter, and technical matters that characterized the session, the set of narratives appeared to be inclusive of what occurred during the session – even the disruptions and surprises caused by the lack of expected science data were opportunities to make observations according to the narrative of “technology discovery”.  |
| (A.3) Eliminating prejudices and preconceptions | * *What prejudices may be active?*
* *What preconceptions may be active?*
* *What personal desires or goals may be active?*

Certainly a personal desire/goal that the tools, especially the ones that S. was most closely involved with, would work and prove their worth in such a setting. A preconception that adding hypertextual formalisms to RST materials would be (more) effective, and that the predetermined approach for generating science data via Brahms into Compendium would be clear and tractable. No discernible prejudices. |
| (A.4) Personal authenticity in the practice setting | * *In what ways is the practitioner acting in an authentic manner (vs. received, affected, etc.)?*

No inauthenticity detected. |
| (A.5) Mediated objects and other interventions should preserve openness and dialogicity | * *How do the representations the practitioner constructs or modifies foster openness and dialogicity?*
* *How do they inhibit them?*.

Following, as they did, explicitly dialogical structures such as IBIS, the representations that the practitioner constructed in this session did not appear to inhibit dialogicity and openness, This was also seen through the conversational style of the meeting and demonstrated willingness to be guided and to make changes when requested. Given the complexity and sometimes confusing nature of the pre-prepared science data representations (automatically generated prior to the meeting), sometimes the need to decipher or navigate took time away from what otherwise might have been further dialogue, which it could be said acted as a constraint. However this was not due to the direct action of the practitioner during the session. |
| (A.6) Artifacts should be clear, expressive, and helpful | * *How clear are the artifacts produced/modified by the practitioner?*
* *How expressive are they?*
* *How helpful are they within the context of practice?*

Several times in the session, the participants themselves noted something S. had done in a positive way, e.g. that it characterized something they’d been wrestling with in a helpful manner. As stated in A.5, all of the practitioner’s artifacts produced during the session were clear, though not all of the prepared artifacts were. The sheer size and complexity of the automatically generated materials caused some confusion, and watching the pracititioner navigate through them at times did not appear helpful to the participants (they would usually stop engaging at those moments). |
| (A.7) Perseverance in the face of checks and resistance | * *What checks to forward progress does the practitioner encounter?*
* *What resistance from participants, materials, etc. occurs?How does the practitioner respond in the face of these?*

Specifics of these are extensively documented in the sensemaking analysis/FYR. The practitioner remained intrepid throughout even when encountering the confounding events, although did express some confusion and frustration at times. However in all cases he quickly recovered, sometimes with some assistance from the participants, and the session returned to forward progress.   |
| (A.8) Clear and focused communication | * *How clear is the practitioner's verbal communication?*

The practitioner’s verbal communication was very clear throughout. At times he was not forceful in his comments (made more in a musing sort of way) and in general deferred verbal ‘leadership’ of the session to Sh., though when he felt something was important to state or draw the participants’ attention to, he did speak up to make sure they paid attention to the issue.* *In what ways does the practitioner maintain focus on the aspects of importance in the situation?*

The participants themselves were very task-focused and time-conscious, and committed to successfully delivering their materials on time for the hab crew. The pre-planned agenda and processes helped to keep things on track, as did the practitioner’s willingness to move on rather than consume too much time trying to solve or diagnose a problem. |
| (B.1) The importance of participants' impulses and desires; attention to what may be bothering or affecting participants | * *What observable or discoverable participant impulses, desires, or other factors are operating in the situation?*
* *How does the practitioner address these?*

As discussed in the shaping form and FYR, there were a number of other background issues that were more of interest to the participants than to the practitioner, mostly to do with RST/hab crew collaboration both in the current mission and in past missions. This came up several times, sometimes at length, in the session, usually when the practitioner was engaged in delinked activity or otherwise at a waiting point. The practitioner did not much engage in these discussions, though some of it was taken up in the observations added to the maps. |
| (B.2) Unfinalizability; preserve room for surprise, imagination, and creativity to emerge | * *In what ways do the practitioner's actions reflect an attitude of unfinalizability toward the participants and their interests, concerns, and agency?*

The practitioner “took care” of all of the logistical and note-taking aspects of the session, allowing the participants to focus on analysis, subject matter, and discussion. He did not guide them on or off of particular subjects, and did not limit or filter (or ignore) their contributions and requested changes. The participants saw their thinking and contribution swiftly incorporated into the visual representations. When problems arose, there was a spirit of cooperative as well as autonomous problem-solving (i.e. both collaborative and individual work/investigation).* *In what ways does the practitioner preserve or close off room for surprise, imagination, and creativity to emerge?*

None detected except as dictated by the time pressure. |
| (B.3) Dialogic orientation | * *How do the practitioner's actions and communication open up or close off dialogue in the situation?*
* *In what ways does the practitioner display openness and sensitivity to the different participant voices (vs. summarizing them into abstractions or types)?*

Covered above. |
| (C.1) Heightened degree of connection between people, setting, purpose, and medium  | * *How do the practitioner's actions help create this kind of connection and integration?*
* *In what ways are the distinctions or boundaries between people, setting, objects, etc. made stronger or lesser?*

The sheer complexity and multiplicity of information, disciplines (e.g. geology, space science, computer science, collaboration technology, geology, biology, etc.) objects, tasks, and people involved in the effort could be overwhelming and even alienating to some of the participants. However the practitioner’s skill in making his part of the proceedings nearly transparent (complex representations and operations happening swiftly and competently in nearly every case) lessened the cognitive burden that might otherwise have weighed on the discussion. The practitioner was able, for the most part, to make the representation appear to serve the purpose it was intended for – bridge the distance and create collaboration between the hab crew and RST. |
| (C.2) High level and quality of communication | * *How does the practitioner elevate (or diminish) the level and quality of communication in the practice setting?*

All of the participants were committed and motivated to make the session work; the practitioner did not need to do anything to elevate the level and quality of communication except to accomplish the part of the task he was responsible for. However as noted above by ensuring that all the participant contributions were swiftly and accurately incorporated into the representation, and by his flexibility when things grew difficult, he prevented what might otherwise have been obstacles to communication.  |
| (C.3) Importance of the past as the background and context to the practice setting | * *In what ways does the practitioner reference or bring in elements of past work, ideas, or events?*

Most of the session involved analysis, discussion or consideration of complex visual artifacts from previous sessions and other sources than the meeting itself, so this permeated the practitioner’s work. As noted above he often had to perform complex and rapid operations to do this with the Compendium and other tools/data. But also, there were frequent conversational references both from practitioner and participants about past meetings, ideas, and imperatives, and how those should be dealt with or referenced or what the implications were for the current session. * *Are such "background" elements combined with "foreground" (current) concerns, ideas, or representations?*

This was done throughout the session. Both materials from the past incorporated into the working maps from the present session, and the present sessions materials transcluded into summary and portal maps to create a high degree of interlinking. NOTE: need an “Anticipated Futures” question in this section as well. Much of the way things unfolded and representational choices were made in the session had to do with how the hab crew (and future RST sessions) would be able to best make use of the materials. |
| (C.4) The relationships of parts to parts and to the whole | * *How does the practitioner focus on both individual details and the relationships of those details to the 'big picture' and each other?*

Similar to C.3, most of the session involved these kinds of relationships – relating the small bits of source data, such as voice notes or images, to analyses, discussions, and hypotheses. * *How are the moves from parts to whole accomplished?*

The practitioner (and the participants) connected these with a variety of hypertextual and conversational strategies, moving back and forth in levels of granularity as necessary. |