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- Public Response to OMB Bulletin on Peer Review.doc

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FACETS wishes to thank the Office for Management and Budget for this opportunity to cite our experiences and give recommendations to this panel on Peer Review, with respect to the Information Quality Act directives.

We feel FACETS is qualified to offer input on the OMB because our view encompasses a wide range of scientific opinion, including some from within different factions of NASA itself, and because FACETS has already been acknowledged by NASA administrators as an organization worth listening to.

To wit, in 2001 FACETS made a specific request of NASA to image a region of particular scientific interest on Mars. According to NASA's Edward J. Weiler, Associate Administrator for Space Science, in 2001 the space agency "responded to the requests of the FACETS group...by targeting [the feature] under question [with] the highest possible resolution, and most optimized illumination, as well as in stereo, to make available observations to the general public in a responsive manner. These data are released and available for interpretation by the FACETS members." (Source: Letter from Dr. Weiler to FACETS dated May 11, 2001.)

Most of NASA's interpretations of space probe data, such as that from the Mars Global Surveyor, are not peer reviewed before being publicly disseminated through various highly visible news agencies (Space.com, MSNBC, CNN, etc.). Rather, they are conducted in the manner of "science by press conference." Rarely, if ever, are forums for rebuttal provided.

The Information Quality Act (IQA) defines any report or assessment shown at NASA's internet sites, or any statements made by NASA scientists using agency information, as a form of public dissemination subject to IQA jurisdiction. Regulations need to be formed to ensure that outside reviewers are incorporated fairly in the process before and after any given federal assessment, especially when involving "Highly Influential Data."

In the absence of any system of "checks and balances" in this process of "science by press conference," we feel that science is being robbed of a richness of diverse opinion vis-à-vis space exploration matters. Bias present in the space agency is thus given free rein to influence media and its consumers before the scientific discussion can even begin.

The controversy surrounding NASA data dissemination issues is magnified as far as the Information Quality Act goes: the data concerns a most profound area of human endeavor--the search for life and origins in our solar system and galaxy. The public clearly has a great interest in examining the topic scientifically today, and depends on NASA to appropriately investigate the question. Qualified scientists and competent independent researchers have found that they are left out of the loop of official investigations. Some of their testimonies are presented later in this memorandum.

FACETS will present this distinguished panel with evidence of how the inability to collaborate in the space science community has led to obvious scientific bias in NASA assessments. FACETS believes that the potential casualty of the lack of outside peer review is scientific discovery itself. Some of these discoveries could be important enough to swing science toward a new paradigm for life in the universe.

Following are examples of questionable public assessments made by NASA contractors which have had deleterious effects on legitimate scientific discussion. We believe these incidents, which typically rely on ridicule rather than on accepted scientific protocols, are ones that could be tempered or eliminated by OMB with proper outside-agency response and debate:

- 1) Dr. Michael Malin, of Malin Space Science Systems, released a highly publicized review which showed a clearly non-anomalous feature (the "smiley face"). The suggestion of this assessment was to debunk the potential to incorporate SETI Science into space probe image analysis in general. Since tax dollars were used to put Dr. Malin into the position to give his opinion, tax dollars should also be used to allow for alternate responses from reputable researchers.
- 2) Jet Propulsion Laboratory assessments concerning the Cydonia Region of Mars (specifically, the assessment of MGS Team Leader Dr. Stephen Saunders in September of 2001), suggesting the area's topographic features can be explained solely by geologic processes. The assessment did not allow for counter-assessments from other reputable geologists, such as Dr. Bruce Cornet, who wrote a rebuttal for Saunders' analysis, explaining that the evidence leaves the doors open for debate. The NASA article "Unmasking the Face" is another NASA article shown at JPL/NASA's website which draws conclusions before entry of other expert points of view, such as that of NASA contactor and engineer Lan Fleming, a NASA contractor whose analysis contradicts the "Unmasking the Face" authors'. Similarly, and more disturbingly, NASA has released anonymous, undated reports "debunking" controversial theories, such as the so-called Artificiality Hypothesis professed by several notable scientists outside the space agency. It is FACETS' belief that anonymous, undated and non-peer reviewed reports should never be allowed to be disseminated to the public or scientific community, as they circumvent the most crucial tenet of scientific protocol, accountability.
- 3) JPL's assessments concerning the recently discovered anomalous features, found planet-wide, known as "Tubes" or "Glass Tunnels." This is a hotly debated issue involving needed scientific conversations with regards to such issues as whether the features are convex or concave. However, NASA is not permitting discussion after a JPL representative delivered an initial assessment (based on a single image) that explains away these highly anomalous phenomena as "dune trains". Subsequent image analysis has allowed independent researchers to amass a solid body of evidence that refutes the dune train theory. Yet public sentiment has been permanently biased by NASA's "science by press conference," which is made possible by its dominant position in the media spotlight and lack of peer review mechanisms in the way the agency disseminates information, particularly that related to "taboo" subjects.

- 4) NASA's recent assessments concerning newly discovered spherules found in large numbers across an ancient Martian seabed. NASA's conclusion is that these spherules are hematite based. But independent researchers who followed NASA's research have recognized that potential readings for nickel were missed. Again, public and scientific opinion is in danger of being prematurely biased due to a complete lack of contrary opinion emanating from outside the space agency.
- 5) Incorrect color calibration with regards to data received from a variety of probes is another issue that may be addressed by changes brought about through the OMB. For example, Albert Yen, one of NASA's own MER rover instrumentation experts, has written that "I have long since concluded the eye is a better spectrometer than certain lab instruments." Yen goes into great detail on how difficult it can be to judge geologically or research an area on Earth remotely via a camera equipped MER-like rover. He also emphasizes how a good true color picture can say much more about geological features than any specialized spectrograph data. (See "Post-test Field Site Write-up" in the additional documentation column at

http://wufs.wustl.edu/fido/tests/aug02/an/default.htm.) Other researchers, such as Dr. Ron Levin, the son of NASA's Viking Project Scientist Dr. Gil Levin (see http://www.biospherics.com/mars/spie2003/SPIE_2003_Color_Paper.htm), have raised similar concerns. Input from independent experts like these could have a significant impact on the accuracy of scientific data reaching the scientific community and public.

FACETS looks forward to providing and receiving more input on the OMB guidelines issue. Please do not hesitate to contact FACETS with any questions or comments.

Best regards,

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