Notes from Extreme Access Monthly Meeting

August 2020

Notes From Discussion (shortform)

Question re: whether constraints for multiple landings would be discussed
Response that a 'bigger sandbox' is currently under discussion to allow conversation about a variety of topics before narrowing down for the September Telecon

Question from chat: Infrastructure at Mars is a key item, at the moon we need to balance 'shots on goal' with 'durable infrastructure' Q for Terry and Angela, what are your thoughts?
Mars missions have benefitted from long term infrastructure buildup, each mission doesn't have to provision everything for itself. This can take a lot of resources (time / money), can be difficult to manage with shifting funding priorities. First thing is to define infrastructure - i.e. providing navigation and timing, communications relay, or surface to power requires a sustained constellation of orbiters. Need to have adaptive solution that can change with infrastructure requirements over the long term (perhaps short term small sat solution). Balance non-continuous need for infrastructure and avoiding obsolescence.

Question: Is there a potential for standardization and interoperability becoming leading issues?
Difficulties pursuing standardization because of relatively small scale of lunar / space missions. This would be motivated more with additional commercial and marketplace activity.

Question: Is there a need for 1/2 u payloads?
Possibly. Need to determine what the right thing to standardize on will be. Size? Interface? Standardization will be important in enabling sustained commercial space.

Question: Should group touch on facilitating space mining technologies and processes?
Should look to ISRU focus group for additional information. This group should think about what end user needs are and identify what exists, what needs to be improved / created. Could be technology or a combination of design / technology / operations.

Question: Question about 'throwaway' cubesats versus benefits of mixing orbital and surface long term communications capabilities - what should group explore?
Not saying earlier necessarily disposable, could be reconfigurable or provisioned on demand. Key is to not assume that the only way to support missions is classified's infrastructure, should be more flexible. Parameters for starting points are currently wide open - South Pole but at what latitude, etc. etc.

Question: Is there any consideration about infrastructure vs. environmental impact.
There needs to be more thought about implications for a shorter term infrastructure. Thinking about the side effects of decisions about infrastructure may be less hard than Mars, but still needs consideration.

Notes From Chat (shortform)

Full chat transcript available on page 4

Request for LSIC EA group members to participate in capabilities database available here: https://forms.gle/U3hUCQ8CBF4vpU1o7
Database will be housed to start on Confluence, which should be opened up to LSIC members next week

Past meeting video and slides are available on the LSIC website: http://lsic.jhuapl.edu/Focus-Areas/Extreme-Access.php

Question re: balancing short term success vs. durable infrastructure (answered in discussion notes)

Statement that the drone ecosystem has many lessons for software and hardware standards (i.e. flight stack, ROS integration, end-to-end simulations)