

Re: Interplanetary communications protocols

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To: sci-space-tech@moderators.isc.org

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"Ami Silberman" <silber@mitre.org> wrote in
news:csmdul\$os\$1@newslocal.mitre.org:

>
> "Henry Spencer" <henry@spsystems.net> wrote in message
> news:IAIuML.C7s@spsystems.net...
>> In article <1105902023.240764.257410@z14g2000cwz.googlegroups.com>,
>> <dave.harper@gmail.com> wrote:
>> >I was wondering what communications protocols have been used in the
>> >past with probes traveling beyond the earth-moon system?
>>
>> The CCSDS protocols <<http://www.ccsds.org>> are essentially universal
>> in deep-space missions, although there is some interest (mostly
>> outside the traditional deep-space organizations) in TCP/IP as an
>> alternative. --
>> "Think outside the box -- the box isn't our friend." | Henry
>> Spencer
>> -- George Herbert |
> henry@spsystems.net
> Blech! I once assigned my Operating System class an assignment to look
> at changes that would need to be made to TCP/IP to be used over
> interplanetary distances. It makes a radio network look pretty awful.
> A cursory glance at "Next-Generation Space Internet: Prototype
> Implementation" from the ccsds site leads me to believe that the
> authors propose to use TCP/IP for communication among and to/from a
> constellation of NEO satellites. (Currently there are applications
> that do use a modified TCP/IP over satcom.) Fundamentally, it isn't
> much different in concept than running it over a radio net -- you have
> less bandwidth than in the wired world, and much longer end-to-end
> delays.
>
> I don't see the point, however, for deep space missions. TCP/IP adds a