

Quantum Computing and Space Traffic Jams

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If you're a regular reader here we've been talking for some time about space, financial clearing, and how Mr. Globaloney would like nothing better than to move the whole financial system to outer space. There he can continue his fraud and other fun and games behind a truly one-way mirror, untouchable and untraceable to us deplorables stuck down here in the gravity well of planet Earth.

With that in mind I have some high octane speculation to advance in respect to this story shared by T.S.:

[NASA's Jet Propulsion Lab uses Microsoft's Azure Quantum to ease Deep Space Network's traffic jam](#)

The story here is very basic: how NASA has teamed up with Microsoft's version of a proto-quantum-computing system to be able to control the increasing traffic jam of all those satellites in Earth orbit:

Microsoft has demonstrated how quantum-inspired algorithms can help smooth out Seattle's snarled traffic, but can they solve NASA's interplanetary data traffic jam?

Initial results from a project at NASA's Jet Propulsion Laboratory suggests they can.

Microsoft's Azure Quantum team says it's been working with JPL to optimize the management of communications windows for

the [Deep Space Network](#). The network relies on giant radio antennas in California, Spain and Australia to handle communications with more than 30 space probes, including the James Webb Space Telescope and NASA's Mars rovers.

Optimizing the schedule for communicating with all those probes requires intensive computer resources, especially because the DSN is having to deal with increasing demands for high-bandwidth data transmissions.

Fortunately, [schedule optimization](#) is one of the sweet spots for Azure Quantum's algorithms. Such algorithms are inspired by the principles of quantum computing – in which information doesn't necessarily take the form of rigid ones and zeroes, but can instead reflect a range of values simultaneously during processing. The algorithms are run on classical computers rather than on quantum computers, which are still in their infancy.

In a [blog posting](#), Azure Quantum reported progress in its effort to streamline JPL's scheduling process. At the beginning of the project, the team recorded run times of two hours or more to produce a schedule. When quantum-inspired optimization algorithms were added to the mix, that time was reduced to 16 minutes. A custom solution handled the scheduling job in even less time – as little as two minutes.

Well, it's not quite quantum computing, but it's close, and you get the idea: a quantum-computing designed algorithm can greatly reduce computing time, even on "old fashioned" computers, and that can increase processing time needed to sort out space traffic jams.

So far so good.

But why? At one level, the answer is obvious: they're going to need *something* to keep track of all of that stuff up there, and make sure it doesn't look like it wants to bump into

something else, and to move it if it does. And that's the deeper level too, and herewith my high octane speculation of the day. Remember all those stories just a few months back, of Elon Musk, and India, launching gobs of small satellites? Why so many? I strongly suspect that at least in part the sheer numbers represent, at some level, the attempt of Mr. Globaloney to build massive redundancy into his planned space financial and clearing systems.

But those numbers are going to need a very different type of control system: enter quantum computing algorithms, and ultimately, quantum computers.

So what I suspect we're looking at here is a kind of prototyping test to the basic architecture of that system.

And so far, it appears to have met with some success...

...See you on the flip side...

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