## Frank Drake lunch notes

Due to tech advances, in 15 years, our civilization may be nearly undetectable. Sutro used to broadcast 31 MWatts. Today, satellites broadcast direct to TV at 20 Watts, only about 1 of which leaks into space.

Drake's guess on civilizations in our galaxy: 10000. But that's only 1 in 10 million stars.

Is altruism a common trait among intelligent civilizations? Likely a Darwinian trait that aids survival.

Now considering looking for light flashes over radio, partly because of our advances in laser.

The focal point of the gravitational lens of our sun is about 500aus away, 10x the distribution of Pluto. Would easily detect city lights hundreds of light years away. 100 years in our future?

"I think the first star we receive a signal from won't be in any catalog." the next step will not to be send anything in return, but to first learn as much as we can.

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