Directors' Perspective: Private Profit vs. Public Good

Imagine that the Hubble Space Telescope takes data on two fields a few weeks apart, and the principal investigator notices asteroid streaks in both that he can connect together. The asteroid is on an Earthcrossing orbit, but the PI keeps the data to himself until he can publish his own science – unrelated to asteroid work, of course. As the asteroid comes closer to Earth, it is picked up by another observatory. To calculate the trajectory accurately, a request is made to the HST Archive, but the data are still protected by the proprietary period, and the PI is out of contact on a hiking trip in the jungles of the Amazon. Do we break the proprietary period in the public interest or preserve the rights of the PI?

The answer seems obvious: in this case, the pubic interest should dominate, especially since the data were taken on a public facility paid for by public taxes. But there are murky scenarios in which the balance between public interest and private profit is not so obvious. Such a case occurred last year, when a group proposed to observe the target of opportunity presented when the next supernova went off in the Galaxy. The Time Allocation Committee (TAC) balked. There was no question about the importance of the science or the advantage of preparing for the observations of a rapidly varying phenomenon for which advanced planning would minimize the risk that bad observing decisions were made. But the group had overlooked the fact that they would have sole rights to the data for 1 year, long after the supernova had faded through maximum light. The TAC felt the potential loss of publicly available data during the critical early phases of the event would vastly outweigh the benefits of pre-planning. So the TAC turned down this otherwise excellent proposal simply because of the proprietary period.¹

Increasingly, the TAC is looking at the appropriateness of proprietary time on proposals that have broad implications for the public good. Many groups recognize this trend and specifically wave some or all of the proprietary period in their proposals. My predecessor, Bob Williams, made the boldest statement about the public interest with the Hubble Deep Field, in which he insisted on *no* data rights to maximize the impact on astronomy. The groups proposing to observe gamma-ray bursts have generally reduced their proprietary rights to a few months, recognizing perhaps that their scientific cases would be strengthened by such an offer. All HST investigators should understand that the TAC may factor proprietary rights into their decisions, especially if the proposals ask for large blocks of time to observe regions of broad interest or if the immediate availability of the data would materially improve the science, such as on rapidly varying sources.

There is a good reason to have proprietary periods for scientific research. Just as patents encourage private enterprise with the incentive for profit, exclusive rights to data for some period ensure that scientists can analyze data thoroughly and publish careful interpretations without rushing to print. The key project on the Hubble constant is probably a good example of an instance where data rights serve science on a large program. Data rights serve the public interest by setting up a market for ideas to foster the success of people who may not have the scientific clout or resources to compete with established groups unless they have some protection for their ideas.

But it does not take a genius to predict that some observations will be very important – the next local supernova, for example – and it would appear counter to the public interest to preserve data rights for all kinds of data taken on public facilities. We have no clear policies to deal with these issues except for the discretion of the Director. The Director is reluctant to intervene in any but the most obvious cases, since the protests from the investigators will be long and loud. It behooves us as a community to think about policies for data rights, if we are to continue to profit from public support. As the Hubble Deep Field shows, our biggest triumphs as a community may well come from work carried out collectively rather than by the rugged individualists we have always held in the highest regard.

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¹ It turned out that the group had simply overlooked the implications of a proprietary period and was perfectly happy to wave their rights, once they understood the oversight. I worked out a private solution with the group in case this low probability event occurred in Cycle 8.