

Prizes, Prize Culture, and NASA's Centennial Challenges

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Technology prizes and competitions are presented, including a history of the use of such prizes, how prizes compare with more common procurement instruments (e.g. contracts and grants), and the many lessons that have been learned through their use. Next, the concept of a “prize culture” is presented and common stereotypes and misconceptions about prizes are identified and addressed. Finally, an overview of the Centennial Challenges program is presented, including its origins and current status.

I. Prizes

A. Introduction to Prizes

Prize competitions have been used throughout history to accelerate the development of many different technologies. The desire for new or better technologies have often come from unmet needs in various sectors of society, including commerce, industry, military, public safety, public health, and adventure/tourism.

The history of successful prize competitions has shown the potential for break-through developments and the accomplishment of feats thought to be “impossible.” In most cases, the detrimental effects are negligible for a competition when the prize is not won, because there was little cost and no resulting purse payment.

Although the U.S. government has a long history of awarding medals to individuals of merit (a.k.a. ‘recognition prizes’), it has only recently begun experimenting with inducement prizes to spur technology developments in selected areas. Centennial Challenges is a program recently initiated at the National Aeronautics and Space Administration (NASA) to apply the prize philosophy to its aeronautics, space science, and exploration goals.

A review of past prize competitions helps to identify some best practices and common pitfalls to guide future competitions.

B. Prize History

Prizes dating back to the 18th century have stimulated technological advances and enhanced various sectors of society, including commerce, industry, the military, public safety, public health, and adventure/tourism. Prize competitions spurred the development of vital technologies during the birth of aviation. A renaissance of competitions and prizes have been offered by for-profit companies, non-profit organizations, and the government as well.

The following prize competitions conducted between the 1714 and 2004 were described in a previous paper^{Superparanumonly}:

1. 18th and 19th Centuries Prizes

- The British Longitude Prize^{Superparanumonly}

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