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Theseus Talente

Cebit Future Talk
March 9th, 2008
Hanover, Germany

History
Longitude Prize.

» In 1714 the British government offered the Longitude Prize for a navigational solution to the **determination of longitude** on the high seas. It was assumed that the solution laid in using star maps as navigational aides and that the winner would be an astronomer but the solution was achieved by a London clockmaker with the **marine chronometer**.
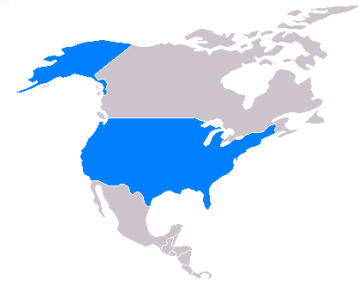
History
Lanz Preis der Lüfte.

» In 1908 Karl Lanz, locomotive manufacturer from Mannheim, offered 40,000 Mark for the first German pilot flying the shape of a lying eight in an airplane constructed and built in Germany. Hans Grade, an engineer from Magdeburg won the prize, Lanz however built 22 Luftschiffe under the brand Schütte-Lanz.
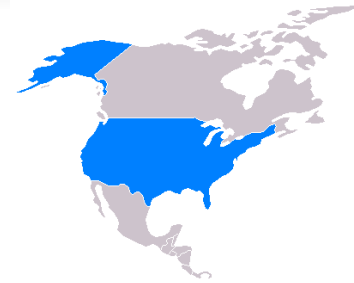
History
Orteig Prize.

» In **1919** Raymond Orteig, a wealthy banker, offered USD 25,000 for the first non-stop flight from **New York** to **Paris**. The prize was won in 1927 by an unknown airmail pilot named Charles Lindbergh who won the hearts of a nation, and his world-changing achievement spawned a **$300 bn. aviation industry.**
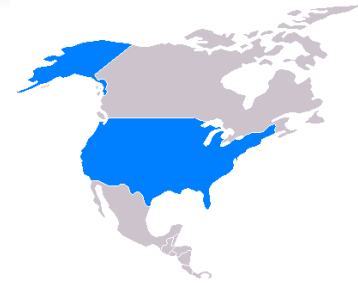
History
Dole Air Race.

» In 1927 James D. Dole, the Hawaii pineapple magnate, offered a prize of USD 25,000 for the first flight across the Pacific Ocean from Oakland, California to Honolulu, Hawaii, a distance of 3870 kilometers. The fifteen competitors were seen off by a crowd estimated to include 75,000 to 100,000 persons.
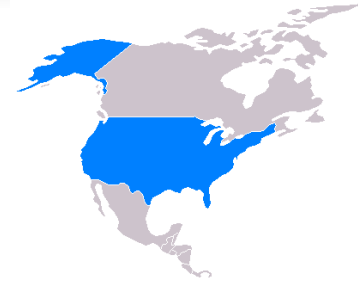
History
X Prize.

» The X Prize Foundation offers several multi-million dollar awards, each given to the first team to achieve a specific goal. In 2004, the Spaceship One team, led by Burt Rutan and financed by Microsoft co-founder Paul Allen, captured the USD 10 million Ansari X Prize, revolutionizing private spaceflight.

History
Centennial Challenges

» In **2005** the US National Aeronautics and Space Administration (NASA) revealed a range of 13 different development contests, called the Centennial Challenges, designed to stimulate **innovation** and **competition** in solar system exploration and ongoing NASA mission areas. The contests include solar sails, lunar excavators or astronaut gloves.

History
Darpa Grand Challenge.
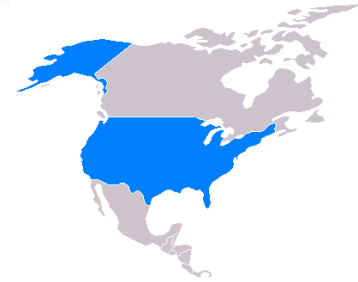
» The 2005 DARPA Grand Challenge focuses on the development of autonomous vehicles. The National Defense Authorization Act of 2001 mandated that "It shall be a goal of the Armed Forces to achieve the fielding of unmanned, remotely controlled technology such that . . . by 2015, one-third of the operational ground combat vehicles are unmanned."
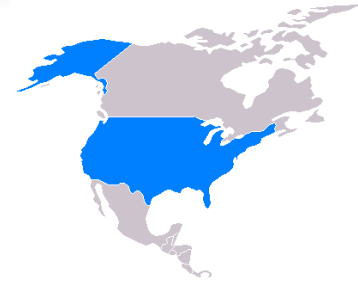
History
NetFlix Prize.
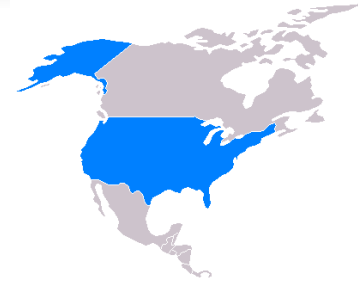
» In 2006, Netflix, a DVD subscription service in the United States, announced an prize of USD 1 million for the individual or group that can achieve a 10 percent improvement in the accuracy of **movie recommendations** based on personal preferences.

History
Google Summer of Code.

» An annual summer program initiated by Google, a search engine company, awarding stipends of $5,000 to students for free software / open-source

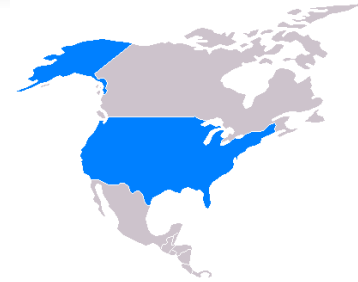coding projects. In 2007 136 open source organizations participated, more than 6,200

applications were received and more than

900 students were selected

Attributes

Attributes

Fostering Innovation.

National Academy of Engineering. *Report of the Steering Committee for the Workshop to Assess the Potential for Promoting Technological Advance through Government-Sponsored Prizes and Contests.* National Academy of Engineering. 1999, 56 pages, 8.5 x 11, Available:

http://www.nap.edu/catalog.php?record_id=9724

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Centennial Challenges.
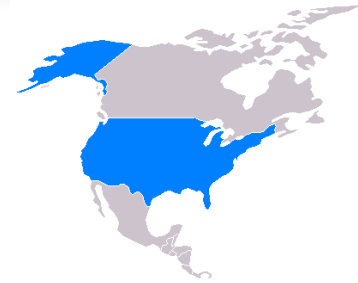
» Keystone Challenges: "To address technology priorities"

» Alliance Challenges: "To leverage partnerships," contests organized in collaboration with non-government partners

» Quest Challenges: "To promote science, technology, engineering and math outreach"

Source: Ken Davidian. *Prize Competitions and NASA's Centennial Challenges Program.* Centennial Challenges. Competition Structure. September 8, 2005, Available: http://ipp.nasa.gov/documents/cc_ilc_paper_2005-09-08.pdf

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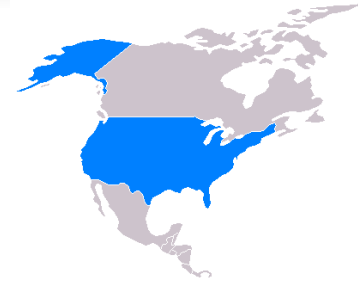
» Stimulate Innovation in Ways That Standard Federal Procurement Cannot - Incite innovation instead of honoring past achievements; Judge and earn awards based on actual achievements, not proposals

» Help Address Traditional Technology Development Obstacles - Develop, integrate, and test with multiple teams or various approaches to the same technical goal

Source: Steidle, Craig E. *Statement of Craig E. Steidle at House Science Committee Hearing on NASA Aerospace Prizes.* NASA Office of Exploration Systems. Status Report, July 15, 2004, Available: http://www.moontoday.net/news/viewsr.html?pid=13390

Attributes
Centennial Challenges.

» Achieve Returns That Outweigh the Program's Investment - Resources spent by teams to win prize competitions usually exceed the value of the prize many times over

» Educate, Inspire and Motivate the Public - Highly visible Challenges will draw substantial public, educator, and student interest

Source: Steidle, Craig E. *Statement of Craig E. Steidle at House Science Committee Hearing on NASA Aerospace Prizes.* NASA Office of Exploration Systems. Status Report, July 15, 2004, Available: http://www.moontoday.net/news/viewsr.html?pid=13390

Attributes
Top Down vs. Bottom Up.

» 1975 Microsoft (Bill Gates and Paul Allen)

» 1991 Linux (Linus Torvalds)

» 1994 Yahoo (Jerry Yang and David Filo)

» 1998 Google (Larry Page and Sergey Brin)

» 1999 MySpace (Thomas Anderson and Christopher DeWolfe)

» 2005 YouTube (Steve Chen, Chad Hurley, Jawed Karim)

Theseus Talente

Theseus

Objectives.

» THESEUS is a research program initiated by the Federal Ministry of Economy and Technology (BMWi), focusing on semantic technologies which determine the meaning of content and knowledge.

» The five year project has a budget of 180 million Euro. BMWi provides some 90 million Euro. The participating partners from industry and research provide the rest.

Theseus Organization
Content Technology Cluster /Work Packages.

» CTC Management

» Video, Audio, Metadata, Platforms

» Ontology Management

» Situation Aware Dialogue Shell for the
                    Semantic Access to Media and Services

» User Interface, Visualization

» Statistical Machine Learning

» DRM/IPR Management

» Evaluation

Source: Theseus Program. http://www.theseus-programm.de/about-theseus

Theseus Talente
Introduction.

» Mit dem Wettbewerb öffnet sich das Programm THESEUS für die Talente in Deutschland, die als schlummernde Potenziale auf ihre Chance warten.

» Mit dem Wettbewerb wird angestrebt, dass Entwicklungen von SchülerInnen, StudentInnen, NachwuchswissenschaftlerInnen, TüftlerInnen, und ProgrammiererInnen, außerhalb des Konsortiums in THESEUS eingebracht werden können.

Theseus Talente
Dates.

23. Oktober **2007** Start

1. November **2007** Bewerbungsbeginn

14. April **2008** Einsendeschluss

April/Mai **2008** Evaluation

Juni **2008** Preisverleihung

Juli/August **2008** Umsetzung

Theseus Talente
Prizes.

1. Preis 10.000 Euro

2.-4. Preis: 5.000 Euro

5.-20. Preis: 2.500 Euro

Praktikum/ Diplom/ Master
Mentoring/ Betreuung
Presse/ Promotion/ Preis

Theseus Talente
Organization.

» Der Theseus Wettbewerb wird über die folgende Website koordiniert: www.theseus-programm.de .

» Für die Ausschreibung und Programmieraufgaben wird den Teilnehmern eine Open Source Entwicklungsumgebung zur Verfügung gestellt (Subversion, CVS, SourceForge)

Theseus Talente
Procedure.

» Der unabhängige Projektträger, das Deutsche Zentrum für Luft- und Raumfahrt (DLR), prüft die eingereichten Beiträge und erstellt eine Liste der Favoriten.

» Anschließend bewertet eine hochkarätige Jury aus Wissenschaft und Wirtschaft die Arbeiten und empfiehlt die Preisträger. Auf einer Preisverleihung Mitte 2008 werden die Preisträger ausgezeichnet.

Theseus Talente
Jury.

» Die Jury setzt sich in einem ausgewogenen Verhältnis aus Vertretern des Ministeriums, der Wirtschaft und der Forschung zusammen.

Theseus Talente
Prize Ceremony.

» Die Preisverleihung erfolgt im Rahmen einer öffent-
lichkeitswirksamen Veranstaltung mit hochrangiger
Beteiligung aus Politik und Wirtschaft Mitte 2008.
Darüber hinaus ist eine Teilnahme der Preisträger an
nationalen und internationalen Konferenzen vorgesehen.

Theseus Talente
Challenges.

» 3 konkrete und bedeutsame Fragestellungen aus jedem Anwendungsszenario für ein Problem oder einen Forschungsansatz

» Zusätzlich jeweils eine weitere offene Fragestellung aus dem inhaltlichen Kontext des Anwendungsszenario mit weiteren Spielraum für innovative Ansätze und Ideen.

Challenges

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Challenges.

» Wie kann man bei der Anreicherung von automatisch
bereitgestelltem Wissen durch Benutzer eine Qualitäts-
kontrolle durch eine automatische Bewertung vornehmen
und hochwertige von minderwertigen Beiträgen unter-
scheiden ?

Theseus Talente
Challenges.

» Wie könnte die Visualisierung eines semantischen Netzes über Musikstücke aussehen, das auf sowohl archivarisch erfassten Daten über Musikalien, als auch auf Daten, die sich direkt aus den einzelnen Stücken selbst ableiten lassen, wie beispielsweise Stimmungen, Harmonien, Taktung oder Dynamik, aufbaut ?

Theseus Talente
Challenges.

» Inwieweit lassen sich Schnittstellen zwischen einzelnen Komponenten der Visualisierung im semantic web standardisieren ?

Theseus Talente
Challenges.

» Wie können serious games Technologien zu Visuali-
sierungs-Techniken für semantic web weiterentwickelt
werden ?

Conclusion
Contact Information.

Thank you for your attention.
I will gladly answer your questions.

Prof. Hendrik Speck

contact (at) hendrikspeck [dot] com
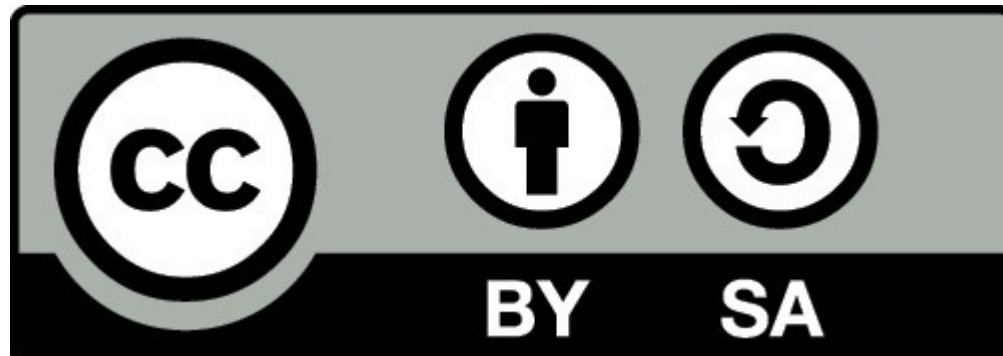
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Conclusion
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