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MIT Mystery Hunt: The Answer is Secondary

An MIT student's idea of having fun is cramming a semester's worth of brain-draining work into three days.
— Claudia Glenn Downing[1]

The MIT Mystery Hunt began over 30 years ago as a one-day, small puzzle-based scavenger hunt. It has grown organically into an annual weekend-long event for more than a thousand people, run each year by a different group of participants. Over the years accepted practices and signature features of the event have evolved, and guidelines have been adopted by the various organizers to make things go as possible smoothly as the event grew. The only prize for winning is the enormous task of creating and orchestrating the next year's hunt, but the intellectual challenge of participating and the excitement of being able to shape the Hunt for a year motivates participants to invest thousands of person-hours of puzzle-solving work.

Background

The MIT Mystery Hunt began in 1981 as a one-day, small scavenger hunt. In the early years, there were typically 30 – 40 puzzles in a hunt. In 1983 the original organizer was graduating, and he announced that the winning team "won" the opportunity to host the hunt the next year. While in some circumstances this may have resulted in the end of the event, the mystery hunt continued and continued to grow. [2]

Today the Mystery Hunt is an annual event for more than a thousand people, many of whom travel across the country to convene at MIT or who participate from around the world by communicating electronically with their teammates.[3] The tradition of hunt organization passing to each year's winning team has continued, "which includes the right to redefine almost any of the hunt's rules." [4]

Mystery Hunt Puzzles

Each mystery hunt involves multiple complicated puzzles. Puzzle answers lead to other puzzles and more clues, which eventually lead to a location on MIT's campus where a coin is hidden.

In an article in *Games Magazine*, one hunt participant and organizer wrote about the puzzles:

Professor Willy Shih and HBS MBA '13 Karen Robinson prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

> These puzzles can be crosswords, anagrams, cryptograms, number puzzles, multimedia puzzles, geometrical puzzles, physical challenges, mystery trails, scavenger hunts, inter-team games, or anything else. To succeed, they may have to determine the duty cycle of an electronic circuit, clamber through a humid steam tunnel, bone up on their crystallography ...[5]

Many puzzles lead to a well-known encoding scheme, such as Braille, Morse code, or semaphore flags for naval signaling, which then must be decoded. Most years there are a few puzzles that require translating between languages, a few that require programming, and some that require specialized technical skills such as reading Feynman diagrams or building analog electronics.

The only award for winning the Mystery Hunt is the right to run the event the following year: to decide on a structure, write all the puzzles, run the hunt's website, plan all the events, and fund all the room reservations and miscellaneous supplies. It is a burden as well as an award, but teams are highly motivated both by the thrill of solving puzzles and by the possibility of implementing their own ideas the next year.

Event Development and Emergence of Teams

To new participants, mystery hunt puzzles look utterly baffling. It is common for the puzzle to be nothing more than a list of phrases (that may not make sense), and the solver is supposed to first figure out what the puzzle is (*i.e.* what to do with the phrases), and then how to solve it. After solving many of these puzzles, and usually after consulting with teammates who have more experience figuring out what the puzzle is from a pile of information, people who enjoy the process gradually become more adept at solving.

Many puzzles are variation on typical puzzle schemes. It would not be surprising to find a crossword that could be solved in exactly two ways, in which the grid squares that were the same between the two solutions spelled a word. Thus, tools for solving crosswords quickly, for searching for words based on regular expression matching, for analyzing a set of letters to see whether it's likely to anagram to a sentence or to a clue phrase, become useful. Some teams have built these tools and use them every year, generally improving on them over time.

One of the most important aspects of the hunt is team organization. Puzzles may take hours to solve, and people may start and stop working on them, or even go to sleep leaving a puzzle partly-started. Teams have their own ways of keeping track of puzzle information and progress, and these systems are also generally improved every year.

These three aspects all make it difficult for a new, inexperienced team to make much headway with the puzzles. The accumulated knowledge, the systems and tools that teams have built and accumulated to solve individual puzzles, and the systems teams have built to help manage the solving process all create an advantage for experienced teams and a functional barrier to entry for new teams.

Event Structure

In the 1980s there were 30 – 40 puzzles in most of the Mystery Hunts.[6] Now there can be over one hundred, or even more than 150.[7],[8] The structure of having metapuzzles emerged early, but the idea of having a theme did not begin until 1992.[9] By 2004 there was enough work for puzzle headquarters (HQ) to do just confirming answers that a system was developed in which HQ could use an online queue. In the mid-2000s a team from based at MIT dorm Random Hall wrote software to help keep track of writing the hunt, which has been used every year since. In 2013 an increase in communication with the MIT administration resulted in a safety lecture before the hunt began.

The basic structure of the Mystery Hunt is as follows:

- Friday at noon: kickoff. The organizing team reveals the theme by staging a story in which something (or someone) needs to be found or caught.
- Friday evening: usually there is a party or gathering with an embedded puzzle. Past puzzles have been based on a rigged poker game played at the party or on patterns in the names of the artists played as background music, to cite two examples.
- Other events may be scheduled for various times over the weekend.
- Puzzle rounds and meta-puzzles: Puzzles are released in sets. Puzzle sets have answers that can be combined into a puzzle (a "metapuzzle"). When a team has an answer to any puzzle or metapuzzle, they can confirm the answer with the organizing team's headquarters.

The hunt leadership changes completely every year, and organizers can "redefine almost any of the hunt's rules."[10] The work of writing a hunt is enormous. At least one organizer (from the 2005 organizing team) has said "Creating this hunt was like having a full-time job on top of my full-time job."[11] Teams work on the mystery hunt for the fun of solving complicated puzzles; organizing teams incorporate aspects of previous years' hunts they have enjoyed and to think of new hunt mechanisms that participants will enjoy and talk about. Both sides are motivated by the social aspect of the Hunt as well as by exercise and demonstration of intellectual strength.

Unwieldy Growth?

Over the years the MIT Mystery Hunt has grown organically, and a community of teams has developed. Barriers to entry have formed even in this non-economic community, and the rotation of event leadership among prominent participants has meant lessons are shared and innovations are kept or discarded, as each person on each organizing team tries to replicate favorite aspect of previous years' hunts.

Growth has made the Mystery Hunt more visible to both puzzle-solvers, and the MIT administration. What was once an informal event with an annual kickoff in the front lobby of the academic buildings now requires large event procedures mandated by MIT and event spaces that must be reserved a year in advance.[1] And, what was once a quiet event enjoyed by the most ardent (nerdy) MIT puzzle lovers is now increasingly written about in publications such as the Boston Globe[12] or Wired[13].

The increased organization necessarily changes the character of the Mystery Hunt. No organizing team can completely decide what to do about the gradual changes, but each year now the organizers are faced with questions: how much official work coordinating with the MIT administration should they do? Should they find administrators who agree strongly with the Mystery Hunt's vision, and see it as a valuable event for the MIT alum community? Or should they be as inconspicuous as possible, to avoid further administrative requirements?

There are questions about the types of puzzles, as well. As the Mystery Hunt has grown it has become "a mainstay on the puzzle calendar,"[14] and there are similar events at universities (including one at UC Berkeley started by past MIT Mystery Hunt participants) and as recruiting events for software companies such as Google or Palantir. Some have argued that the MIT puzzles requiring knowledge of arcane computer languages, details of the MIT campus, or advanced physics notation are inaccessible. Should the Mystery Hunt slowly evolve to accommodate its increasing popularity and be accessible to its growing base of fans? Or should it preserve its MIT character?

[1] Wired, writing after an unusually long Hunt in 2013, reported that the length of the hunt has also increased over time. This is not true, however: the length of the hunt swings between under 40 hours and around 60 hours: http://ergodicity.net/2011/01/05/history-of-mystery-hunt-lengths/

Endnotes

[1] Claudia Glenn Downing, "MIT Nerds," *Discover* (June 2005)

[2] MIT Mystery Hunt official web page: http://www.mit.edu/~puzzle/history.html, accessed on December 30 2013

[3] MIT Mystery Hunt official web page: http://www.mit.edu/~puzzle/history.html, accessed on December 30 2013

[4] Eric Albert, "The Great Annual MIT Mystery Hunt". Games Magazine, July 1991, accessed at http://www.mit.edu/~puzzle/articles/gamesarticle.html on December 30, 2013

[5] Eric Albert, "The Great Annual MIT Mystery Hunt". Games Magazine, July 1991, accessed at http://www.mit.edu/~puzzle/articles/gamesarticle.html on December 30, 2013

[6] Thomas Snyder, "2013: The Year the Mystery Hunt Broke". Wired, January 24, 2013, accessed at http://www.wired.com/magazine/2013/01/2013-the-year-the-mystery-hunt-broke/ on December 30, 2013

[7] Thomas Snyder, "2013: The Year the Mystery Hunt Broke". Wired, January 24, 2013, accessed at http://www.wired.com/magazine/2013/01/2013-the-year-the-mystery-hunt-broke/ on December 30, 2013

[8] Karen Rustad, "Mystery Hunt Post-Mortem: The Hunt We Wanted and the Hunt We Had". Little Green River (personal blog), January 24 2013. Accessed at http://littlegreenriver.com/weblog/2013/01/24/mystery-hunt-post-mortem-the-hunt-we-wanted-and-the-hunt-we-had/ on December 30, 2013

[9] ibidd

[10] MIT Mystery Hunt official web page: http://www.mit.edu/~puzzle/history.html, accessed on December 30 2013

[11] Sasha Brown, "Sleepless in Cambridge, they hunt they mystery coin", MIT Tech Talk, January 26 2005. Accessed at http://web.mit.edu/newsoffice/2005/techtalk49-15.pdf on December 30 2013.

[12] Billy Baker, "Aha!: At MIT Mystery Hunt, teams labor to solve elaborate puzzles", Boston Globe, January 17, 2011. Accessed at http://www.boston.com/news/local/massachusetts/articles/2011/01/17/at_mit_mystery_hunt_teams_labor_to_solve_elaborate_puzzles/ on January 6th, 2014.

[13] Thomas Snyder, "2013: The Year the Mystery Hunt Broke". Wired, January 24, 2013, accessed at http://www.wired.com/magazine/2013/01/2013-the-year-the-mystery-hunt-broke/ on December 30, 2013

[14] Thomas Snyder, "2013: The Year the Mystery Hunt Broke". Wired, January 24, 2013, accessed at http://www.wired.com/magazine/2013/01/2013-the-year-the-mystery-hunt-broke/ on December 30, 2013