

# Amazon Mechanical Turk

[www.mturk.com](http://www.mturk.com)

Executive review of the Amazon Mechanical Turk crowd-sourcing service for the Internet dating and social networking industry.

The contents of this document are provided for informational purposes only and are based on documentation provided by Amazon Mechanical Turk. Details of the service are subject to change at the provider's discretion. For the most up to date information, please visit [www.mturk.com](http://www.mturk.com).

# Overview

Mechanical Turk is a logistical resource that allows companies to outsource many types of tasks which require human intelligence. This service provides access to a diverse and dynamic workforce which scales seamlessly to current demand while reducing costs and management overhead.

## How the Service Works

The Mechanical Turk service functions through Human Intelligence Tasks, or "HITs." These are predefined tasks with set guidelines and objectives. HITs are constructed by Requesters and made available to Workers.

Requesters are businesses who have work requirements. This work is posted as a HIT or batch of HITs. Requesters pay Workers for each completed HIT.

Workers sign up on the Mechanical Turk site to be eligible to work on and complete HITs. They are screened to meet certain qualifications. Workers are from countries all over the world, providing access to a 24/7 workforce.

## Mechanical Turk in the Internet Dating Industry

Mechanical Turk's greatest benefit to the Internet Dating industry is in the realm of profile approval. The number of new profiles can vary greatly from day to day. Dedicating employees to profile approval can be a costly and time consuming endeavor. This is where the on-demand, scalable workforce of Mechanical Turk comes into play. Thousands of profiles can be reviewed in a matter of minutes by several hundred workers, cutting time-lines drastically. This allows new customers to be visible sooner, improving the overall user experience and satisfaction.

An aspect of profile management that requires human intervention is the approval of pictures and other multimedia content. Mechanical Turk can be used to quickly screen photos and videos for acceptability prior to the files being visible to customers, greatly reducing the reliance on reporting based moderation. This proactive approach will also help improve the customer experience by removing material before it can offend a customer.

Another possibility for the Mechanical Turk service is the generation of keywords, or tagging of profiles. Workers can be instructed to identify key words or phrases in profiles which can be used to improve searching and categorization.

The Mechanical Turk system facilitates a flexible and thorough profile and content approval process which can be quickly and easily adapted as sites grow.

# Costs

The Mechanical Turk service is available without any licensing or setup fees. This makes it possible to implement and integrate it into a site without major investment and upfront costs. Workers are paid a reward price for each HIT they complete once it is approved by the Requester. The reward price is determined by the Requester for each specific HIT or batch of HITs. Rewards are paid out of a pre-funded account. This gives a company great flexibility and control over their budget for profile and content approval. Amazon Mechanical Turk collects a 10% commission on top of the reward amount paid to a worker for completed and approved tasks. There is a minimum \$0.005 commission per hit.

Here are two examples of the costs involved in using this service:

Ex 1: \$0.25 reward per HIT, 2 min task (\$8/hour equivalent)	1000 HITs = \$250 + \$6.25 commission (10% rate)
Ex 2: \$0.15 reward per HIT, 2 min task (\$4.50/hour equivalent)	1000 HITs = \$150 + \$5 commission (0.005 minimum)

Pricing your HITs fairly is the key to success. You can determine your HIT reward based on how much you would like to pay per hour for the work by using this formula:

$$(\text{Minutes to complete HIT}) \times ((\text{Rate per hour}) / 60 \text{ minutes}) = \text{Reward per HIT}$$

## Human Intelligence Task Development

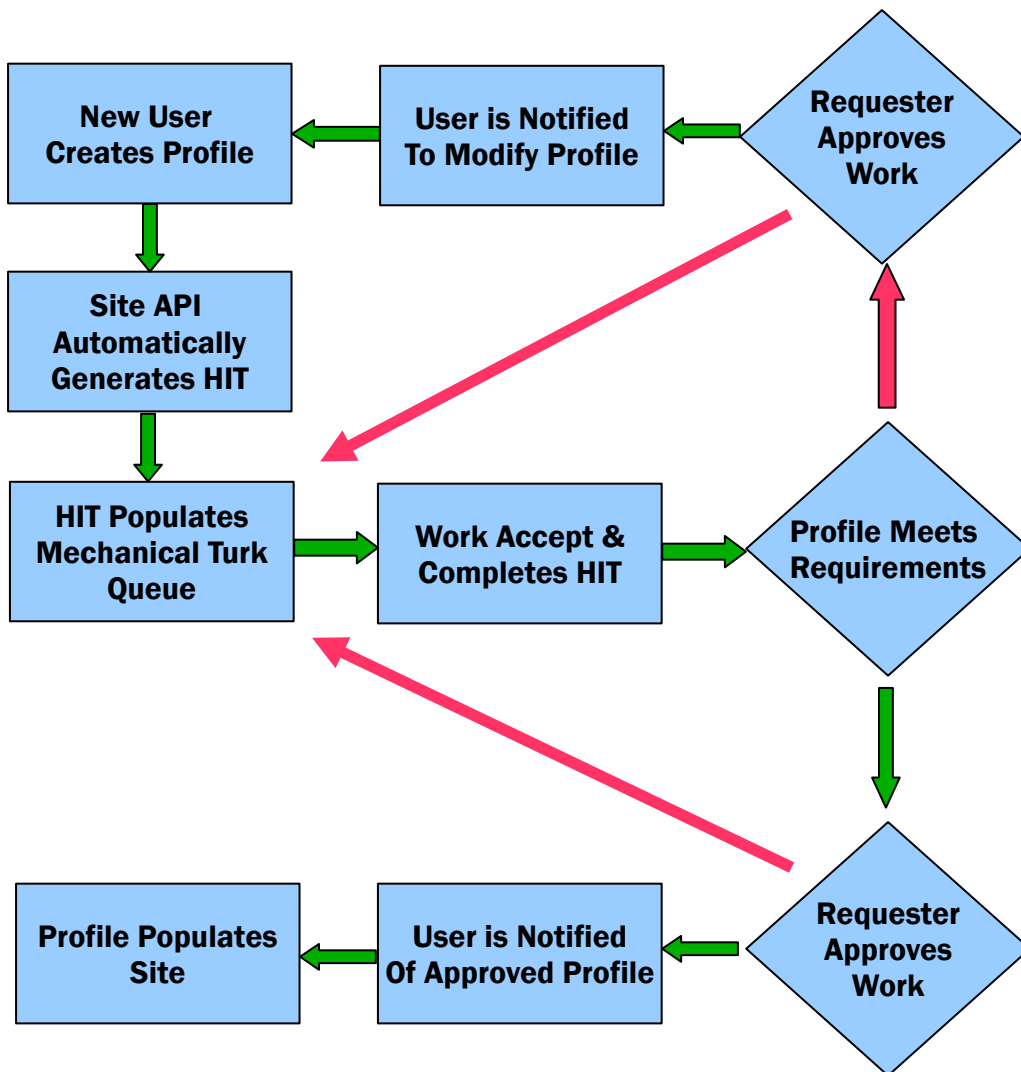
### Workflow for Requesters

- 1) Write your HIT: Write the question or task for Workers to answer or perform.
- 2) Test your HIT: Publish your HIT on the *Amazon Mechanical Turk Developer Sandbox*. The *Amazon Mechanical Turk Developer Sandbox* is a simulated environment that allows you to view your HIT as it would appear to Workers.
- 3) Publish your HIT on the Amazon Mechanical Turk production system. This step makes your HIT available to workers to complete.
- 4) Workers accept your HIT and complete the assignment. You can view the status of your HITs on the Requester Website
- 5) Process the results. When a Worker completes an assignment, you can view the results, output the results to a file, and accept or reject the work.
- 6) Manage your HIT. You can extend the completion time for your HIT, expire the HIT early, add additional assignments, modify the HIT properties, or block Workers whose work does not meet your standards.

## Integrating Mechanical Turk into your Profile Approval Process

Mechanical Turk can be easily integrated into your existing profile and content approval system using a number of programmable API's. There is a complete Service Developer Kit guide available to assist your programmers in integration and automation.

Mechanical Turk utilizes XML and supports C#, Java, Perl and Ruby. This gives companies great flexibility in developing a reliable, automated and seamless integrated profile and content approval system.



# Quality Control

All complete HITs go into a queue for you to accept or reject. If you reject a HIT, then you are not charged for it and it can be returned to your active HITs. If there are particular workers you are impressed with, you can add them to your worker contacts and send work directly to them. You can blacklist workers who do not complete your HITs at your standards. This will prevent them from accepting any future HITs your company posts. You may also pay bonuses to highly productive workers. Through these methods, you can build a reliable Mechanical Turk workforce which completes your tasks quickly and properly. This leads to less rejected HITs and wasted time and high quality work.

## HIT Management Interfaces and Options

	Web Interface	Command Line Tools	API
<b>Creating and Managing your work</b>			
Create and manage your HITs in batches	✓	✓	
Support tab delimited input files	✓	✓	
Can be integrated into back-end systems			✓
Manage HITs created via the CLT or API		✓	✓
Create HITs visually with HTML editor	✓		
Start with our sample HTML templates	✓		
Define HITs in XML		✓	✓
Host HITs on your own server		✓	✓
Create notifications to be informed when HITs are updated			✓
<b>Managing the workforce</b>			
Create qualifications to manage the workforce		✓	✓
Use system qualifications with your HITs	1	upto 10	upto 10
Use custom qualifications	1	upto 10	upto 10
Block Worker from submitting future HITs	✓	✓	✓
Remove a block from a Worker		✓	✓
Give a Worker a bonus		✓	✓
Email a Worker			✓

# Additional Resources

## **Mechanical Turk Guides and Information**

Mechanical Turk Best Practices

[http://mturkpublic.s3.amazonaws.com/docs/MTURK\\_BP.pdf](http://mturkpublic.s3.amazonaws.com/docs/MTURK_BP.pdf)

Command Line Tools User Guide

[http://mturk.s3.amazonaws.com/CLT\\_Tutorial/UserGuide.html](http://mturk.s3.amazonaws.com/CLT_Tutorial/UserGuide.html)

Complete Details about Amazon Mechanical Turk

<http://aws.amazon.com/mturk/>

Service Developer Kit Information

<http://developer.amazonwebservices.com/connect/kbcategory.jspa?CategoryID=121>

## **Services to Enhance Mechanical Turk**

CrowdFlower.com – This service allows companies to tap into the Mechanical Turk workforce, but adds in features to qualify results and rate the confidence in workers. Their CrowdControl system monitors worker responses and compares them to the responses of other workers, showing them where they may have made a mistake. Accuracy is obtained through redundancy in HITs. CrowdFlower charges a 33% premium over the reward price for the task.

HIT-Builder – This software is designed to create HITs for Requesters without the need for writing code. The program will import database or spreadsheet data and generate the code for each HIT then publish the hit to the Mechanical Turk site. The software also assists with management and organization of the results. HIT-Builder has three subscriptions plans: Demo, which is free; Basic, for \$9.95 per month; and Power, which is \$24.95 per month. For additional pricing information, visit <http://www.hit-builder.com/faq.aspx>.