INTRODUCTION

There are tens of thousands of web cameras around the world that are publicly available on the Internet. The images captured by these cameras contain visual data that can be extracted by researchers using image analysis programs.

Continuous Analysis of Many Cameras (CAM2) is a cloud-based framework that allows researchers to collect data using image analysis from many cameras.

THE WEBSITE

http://cam2.ecn.purdue.edu

To use the CAM2 system, users create submissions on the website. A submission is a combination of a camera configuration and image analysis module.

Configurations: Select cameras using an interactive Google Maps widget or by browsing the latest snapshots from the cameras

Modules: user can upload their own image analysis modules integrated with the CAM2 API or choose from a set of stock modules.

THE SYSTEM

- Repository of 70,000+ cameras located worldwide
- Custom application programming interface (API) that enables integration of external image analysis programs
- Back-end resource management system that utilizes Amazon cloud storage
- An interactive front-end web application

ALPHA 1.4 RELEASE

Introduces new features, fixes bugs and streamlines website to improve stability, functionality and user experience.

Reorganized Submission Process:
- User is walked through the submission process step by step.
- Submissions can also be created quickly on the Quick Submit page.

FUTURE PLANS

- Expand camera repository to over 100,000 cameras
- Support archive video and image data
- Automated system testing
- Scale up to hundreds of back-end machines to facilitate large-scale image analysis

ACKNOWLEDGEMENTS

National Science Foundation, Amazon, National Park Service, many Departments of Transportation

REFERENCES
