Technical Disclosure Commons

January 06, 2016

APPLICATION FOR PROVIDING ACCURATE PHOTO TIMESTAMP

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APPLICATION FOR PROVIDING ACCURATE PHOTO TIMESTAMP

ABSTRACT

An application for providing a photo with an accurate timestamp in a computing device is disclosed. The application displays the correct time of the captured photo, and uses image processing and backend logic to fix the timestamp and location for the photo within a few hours of that time. Using the application, a user can geolocate each photo which can result in improved photo classification and searching.

BACKGROUND

Having accurate timestamps for photos is important for search operations. Accurate timestamp and location history provided by automatic geolocation, can result in improved photo classification and searching. Unfortunately, the time recorded by digital cameras is often unreliable for various reasons. For example, the user may never set the time, the camera's time could have drifted significantly, or is not updated after moving to a different time zone, or it may not have adjusted to daylight savings time. Even in a mobile phone camera set with correct local time, the recorded exchangeable image file format (EXIF) data does not include time zone information. Thus, photos captured via mobile phone generally have an accurate timestamp, but unfortunately the time zone is not recorded. So, even for these photos, the timestamp information is incomplete without the geolocation. This disclosure provides a solution for providing photos with accurate timestamps.

<u>DESCRIPTION</u>

An application for providing a photo with an accurate timestamp in a computing device is disclosed. The application displays the correct time of the captured photo, and uses image processing and backend logic to fix the timestamp.

In one instance, the application displays the current coordinated universal time (UTC) and location as plain text and a QR code. The user has to take a picture of the screen of the mobile phone application showing the UTC time and location. In another instance, backend photo processing is used for recognizing the application screen and the information is used to fix timestamps and locations for photos within a few hours of that time. This will correct the wrong time recorded in the external camera and missing time zone information in a mobile phone photo. In some instances, the user may include a screenshot of the application screen for auto-backup in order to fix their mobile phone photo with timestamp and location.

In some instances, a frontend photo application may have a user interface (UI) that allows batch corrections including time-updating. By default, the application may only correct photos within a few hours of image capture. The application may therefore also allow the user to make similar or batch corrections to a set of photos recorded with wrong time.

The method for correcting photo timestamp can be implemented with any existing photo application in a computing device. The application saves time of the user by automatically correcting the photo timestamp with accurate time and location. Photos captured by multiple cameras could be organized or classified in the correct order based on accurate timestamps.

In situations in which the systems discussed here may collect personal information about users, or may make use of personal information, users are provided with one or more opportunities as described above to authorize and control whether programs or features collect user information, e.g., information on user actions or activities, user preferences, content created or submitted by a user, or user location. In addition, certain data may be treated in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user's identity may be treated so that no personally identifiable information can be determined for the user, or a user's geographic location may be generalized where location information is obtained (such as to a city, ZIP code, or state level), so that a particular location of a user cannot be determined. Thus, a user has control over whether information is collected about the user and, if it is collected, how the information is used by a server.