

(12) **United States Patent**
Short et al.

(10) **Patent No.:** **US 10,223,732 B2**
(45) **Date of Patent:** **Mar. 5, 2019**

(54) **IDENTIFYING ITEMS IN IMAGES**

G06F 17/30241 (2013.01); **G06F 17/30268**
(2013.01); **G06K 9/6288** (2013.01); **G06Q**
10/02 (2013.01); **G06Q 30/0202** (2013.01);
(Continued)

(71) Applicant: **Accenture Global Solutions Limited**,
Dublin (IE)

(72) Inventors: **Matthew Thomas Short**, San Jose, CA
(US); **Mary Elizabeth Hamilton**, San
Mateo, CA (US); **Robert Dooley**,
Dublin, CA (US); **David T. Nguyen**,
San Jose, CA (US); **Leeann Chau**
Tuyet Dang, San Jose, CA (US)

(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,606,645 B1 * 12/2013 Applefeld G06T 19/006
705/14.25

8,942,468 B1 1/2015 Toshev et al.

(Continued)

Primary Examiner — Ryan P Potts

(74) *Attorney, Agent, or Firm* — Fish & Richardson P.C.

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 323 days.

(21) Appl. No.: **15/256,048**

(22) Filed: **Sep. 2, 2016**

(65) **Prior Publication Data**

US 2017/0068872 A1 Mar. 9, 2017

Related U.S. Application Data

(60) Provisional application No. 62/214,562, filed on Sep.
4, 2015.

(51) **Int. Cl.**

G06Q 30/06 (2012.01)

G06K 9/62 (2006.01)

G06F 17/30 (2006.01)

G06Q 30/02 (2012.01)

G06F 3/0488 (2013.01)

(Continued)

(52) **U.S. Cl.**

CPC **G06Q 30/0633** (2013.01); **G06F 3/0482**
(2013.01); **G06F 3/0488** (2013.01); **G06F**
3/04842 (2013.01); **G06F 17/3087** (2013.01);

(57) **ABSTRACT**

Methods, systems, and apparatus, including computer pro-
grams encoded on computer storage media, for using loca-
tion data to identify and provide services in association with
items appearing in captured images. One of the methods
includes receiving, from a device, an image and location
data representing the device's physical location, determin-
ing, based on the location data, that a particular set of one or
more locations are within a threshold distance of the
device's physical location, accessing, for each of the one or
more locations in the particular set, item information that
indicates one or more items that are associated with the
location, determining, based on the accessed item informa-
tion, that the image likely shows a particular item that is
associated with one or more locations in the particular set,
and providing, to the device, instructions for presentation of
information about (i) the particular item and (ii) one or more
locations in the particular set that are associated with the
particular item.

15 Claims, 21 Drawing Sheets

