

Using Kindles in university teaching

(don't take my paper away or are e-book readers any good?)

Mike J. Smith



Poll: What sort of drink would you like NOW?

http://www.polleverywhere.com/multiple_choice_polls/LTEwOTcxNjEzODQ



Poll: Do you use electronic submission of coursework?

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Poll: Do you mark electronically?

http://www.polleverywhere.com/multiple_choice_polls/NjA1MjA5MDg

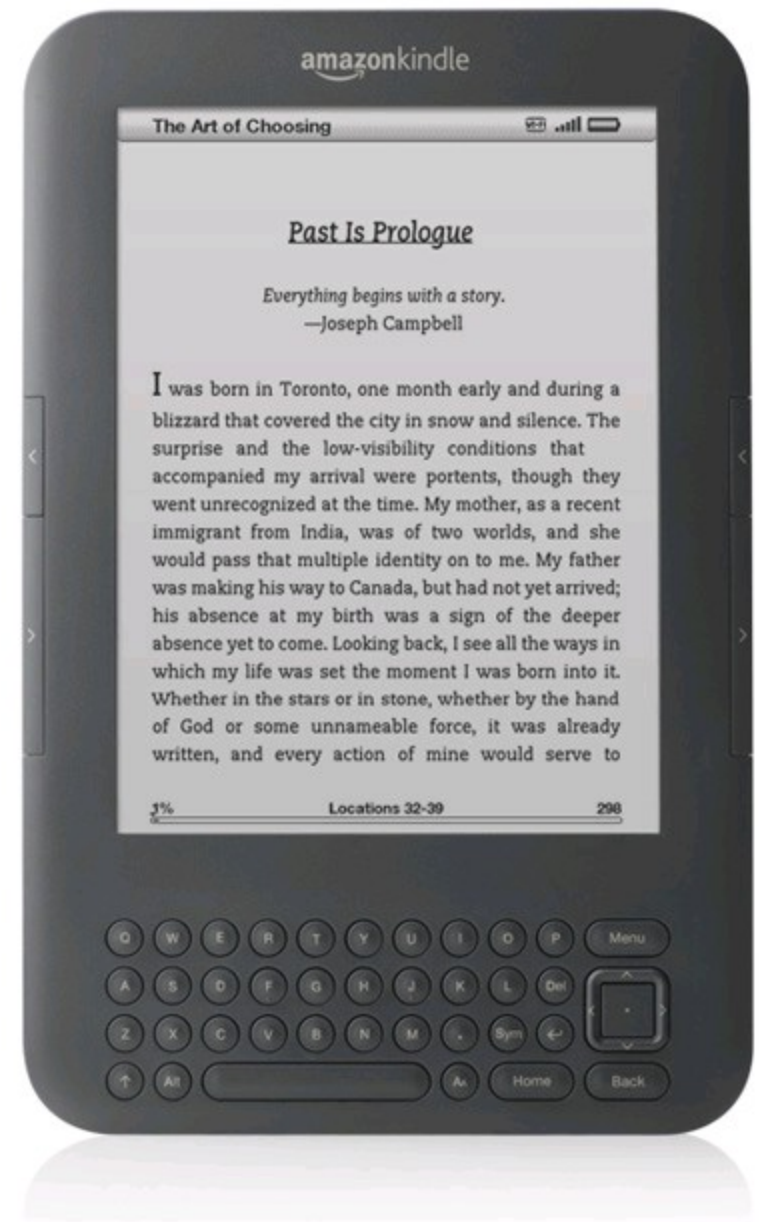


Poll: Have you used an e-book reader?

http://www.polleverywhere.com/multiple_choice_polls/MTE5NzE4Njc1MQ

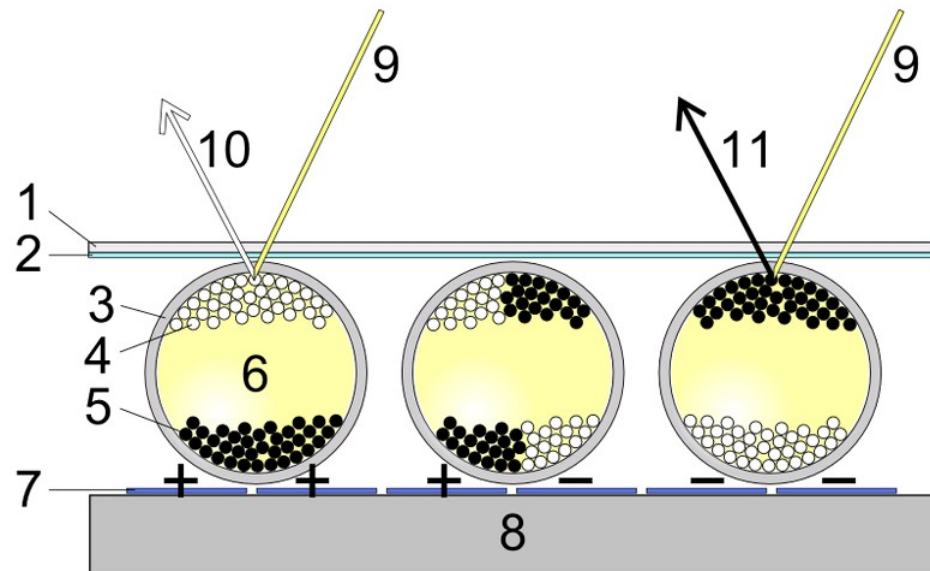
What is it?

- <http://www.amazon.co.uk/gp/mpd/permalink/mJIGXIG23SBEZ>



Source: <http://www.amazon.co.uk/Kindle-Wireless-Reader-3G-Wifi-Graphite/dp/B002LVUWFE>

How does it work?



The Kindle hardware devices use an E-Ink electronic paper display that shows up to 16 shades of gray, minimizes power use and simulates reading on paper.

Wikipedia

Source: [http://en.wikipedia.org/wiki/File:Electronic_paper_\(Side_view_of_Electrophoretic_display\).PNG](http://en.wikipedia.org/wiki/File:Electronic_paper_(Side_view_of_Electrophoretic_display).PNG)

Tips 'n Tricks

- Web browser
- Text to speech (have you seen “Wargames”?)
- Play mp3s
- Supports MOBI, PDF, TXT
- Synchronises your reading (Android, iPhone, Windows)

Tips 'n Tricks

- Search filenames and within files
- Use the dictionary!
- Make (and read) user notes
- Resize text and rotate pages
- Print screen: Alt-Shift-G
- Minesweeper: Alt-Shift-M

Text Display

- Native file formats and text reflow
- Non-native formats and page layout

Marking.... on that thing?

- Three steps:
 1. E-submission: TurnItIn
 2. File format: download as PDF
 3. Kindle setup: landscape



Threshold-free object and ground point separation in LIDAR data

Marc Bartels, Hong Wei*

Computational Vision Group, School of Systems Engineering, University of Reading, Whiteknights, Reading RG6 2AH, United Kingdom

ARTICLE INFO

Article history:
Available online xxx

Keywords:
LIDAR
Remote sensing
Skewness Balancing
CSF
DSM
DTM

ABSTRACT

Light Detection And Ranging (LIDAR) is an important modality in terrain and land surveying for many environmental, engineering and civil applications. This paper presents the framework for a recently developed unsupervised classification algorithm called Skewness Balancing for object and ground point separation in airborne LIDAR data. The main advantages of the algorithm are threshold-free and independence from LIDAR data format and resolution, while preserving object and terrain details. The framework for Skewness Balancing has been built in this contribution with a position model in which unknown LIDAR tiles can be categorised as ‘hilly’ or ‘moderate’ terrain. Accuracy assessment of the model is carried out using cross-validation with an overall accuracy of 95%. An extension to the algorithm is developed to address the overclassification issue for hilly terrain. For moderate terrain, the results show that from the classified tiles detached objects (buildings and vegetation) and attached objects (bridges and motorway junctions) are separated from bare earth (ground, roads and yards) which makes Skewness Balancing ideal to be integrated into geographic information system (GIS) software packages. Crown Copyright © 2010 Published by Elsevier B.V. All rights reserved.

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The analysis of Digital Surface Models (DSMs) from complex LIDAR data has been widely discussed and is still challenging (Vu et al., 2004). Commonly, the first task to investigate LIDAR point clouds is to separate ground and object points as a preparatory step

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FARRIS et al. High resolution topographic model of Panarea Island

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Aerial Photogrammetric DTM Extraction

A digital terrain model (DTM) of Panarea island with a grid size of 2.5 m was extracted automatically in the UTM-WGS 84 reference system from the 26th May 2003 stereoscopic models, whilst the DTM of the islets was extracted with grid size of 2.5 m from the 17th May 2003 stereoscopic model. During generation of the photogrammetric model of the 5th July 1987 survey some additional DTMMs of submarine portions visible in the aerial images in shallow water along the coastlines of the islets were automatically extracted with a grid size of 1 m. The digital models of Panarea and the islets, generated automatically, were edited in zones of low correlation and in urban and vegetated areas by adapting the contour lines to the stereoscopic terrain morphology. Fig. 1 shows the results of the two DTMs of 2003, the location of PANA and PA3D GPS stations, and the position of the photogrammetric GCPs, together with a map of the Aeolian Islands archipelago. From the first DTM (Panarea) a colour orthophotomap of the area was also generated (Fig. 2).

During the automatic analysis, the software for DTM extraction provides a correlation

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for generating Digital Terrain Models (DTMs), normalised Digital Surface Models (nDSMs), and subsequent object classification (Oude Elberink and Maas, 2000). Many filtering algorithms have been explored for specific applications, of which most of them anticipate knowledge about objects and terrain, e.g. slope-based (Sithole, 2001; Tarsha-Kurdi et al., 2006), geometry-based (Weidner, 1997; Axelsson, 1999, 2000; Sohn and Dowman, 2002) and curvature-based filtering (von Hansen and Vögtle, 1999; Vosselman and Dijkman, 2001; Ahlberg et al., 2004). Linear prediction models employ several tunable parameters (Kraus and Pfeifer, 1998; Pfeifer et al., 2001; Cobby et al., 2001) which have to be set with respect to terrain or objects. Moreover, most algorithms do not preserve minute object and terrain details while generating DTMs, as they rely on rough approximations. Prominent examples are morphological filters, e.g. (Kilian et al., 1998; Zhang et al., 2003; Chen et al., 2007), adaptive TIN densification (Kraystek, 2003; Elmqvist et al., 2001; Axelsson, 2000) and even robust interpolation (Kraus and Pfeifer, 1998; Pfeifer et al., 2001) which compromise accuracy for handling sloped terrain. More complex approaches such as data fusion involve auxiliary information such as co-registered bands to achieve a separation of object and ground points (Hyyppä et al., 2005; Sohn and Dowman, 2007; Rottensteiner et al., 2007; Zebedin et al., 2006). Extensive external information – mostly from data bases – are employed for knowledge-based filtering (Brenner, 2000; Nardinocchi et al., 2003). Only recently, statistical filtering algorithms experienced a renaissance as an alternative to object-based filtering. An unsupervised LIDAR filtering algorithm – Skewness Balancing – has been developed to separate object and ground points in LIDAR data (Bartels et al., 2006).

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Essay Title

Introduction

This paper briefly reviews the processes for crediting input to published research and survey work, highlighting some of the deficiencies that this introduces. This forms the basis for describing strategies introduced at the Journal of Maps to provide a greater level of flexibility and granularity in allocating authorship credit. This is illustrated using the British Geological Survey's (BGS) 1:625,000 Bedrock Geology Map of the United Kingdom as an example. As organizations seek to professionalize the workplace, they are increasingly under pressure to both enhance the skills base of their staff and subsequently measure the value that each individual contributes to the performance of the organization. As a result, it is common for many

More marking?

- So I can read it.... what next?

Issues

- Ummmm..... they break!
- “collections” ... folders would be better
- screen size
- colour
- notes



Source: http://en.wikipedia.org/wiki/File:KDX_and_K2.jpg

And research use?



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doi:10.1016/j.patrec.2010.03.007

Please cite this article in press as: Bartels, M., Wei, H. Threshold-free object and ground point separation in LIDAR data. Pattern Recognition Lett. (2010), doi:10.1016/j.patrec.2010.03.007

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Page 1

(1 of 11)

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25%

Page 5

(5 of 20)

And student use?

- Looking to trial on our DL program 2011/12
- Preload course documents
- “push” content



Poll: Would you like to trial an e-reader for marking?

http://www.polleverywhere.com/multiple_choice_polls/MjAyNDg1ODEyNQ

Questions?

Acknowledgements

- <http://www.collegedegrees.com/blog/2008/06/17/hack-your-kindle-100-tips-resources-and-tutorials-to-get-more-out-of-the-amazon-kindle/>
- <http://www.geek.com/articles/gadgets/kindle-3-hidden-features-include-2-games-image-viewer-screenshot-grab-20100930/>



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