

# Patent Points

**NOW STARTING MY 23<sup>RD</sup> YEAR...**

## Midwest Cracks Down on Patent Trolls

Many small businesses receive unwanted mail accusing them of patent infringement. A typical letter might tell the business that they are violating one or more patents, but for a small fee the patent owner will license the patent. The patent owner may be sending out hundreds or thousands of such letters, spamming many business owners while hoping that a few send in a payment rather than face the risk of large legal fees.

One Texas company with a computer-scanning patent sent out over 15,000 such letters, but the company did not file any lawsuits until the government began investigating the company. Fewer than 20 targets responded to the letters and paid the money.

Even a small pizza chain was targeted by patent trolls for having an online nutrition calculator. These unsolicited letters are one of the top complaints I hear from my clients. Are they being singled out? Should they pay or ignore the letter? Can anything be done?

State Attorneys General have been filing cases against such patent trolls to protect their local businesses. Minnesota went even further, requiring that the Texas company get approval before sending out any more demand letters. Thus this Midwestern state of Minnesota is ground zero in the new fight against patent trolls.

Minnesota has been a leader in fighting patent trolls, more so than states such as California and New York. Minnesota recently passed a "patent troll" law that allows the

Minnesota Attorney General to bring civil action against one who has made a "bad-faith claim" in a patent issue. These "trolls" may face a penalty of up to \$50,000 per violation.

Currently only 6 states have enacted similar legislation against patent trolls.

While patent law is a federal government function, states are entering the fray in their role to protect consumers. The state AG may step in to fight off patent trolls who are over-asserting their patent rights, rather than attack the patent itself.

I recently met face-to-face with Carissa Kemp, an analyst at the Minnesota Attorney General's Office in St. Paul, MN. Ms. Kemp explained that small businesses can file a fraud report online with her office. If enough complaints are received from a particular patent troll, her office can investigate and take action.



Complaints may also be filed with the federal government (FTC) or with the State Attorney General's web site of your particular state. However, California and the FTC are not as aggressive as Minnesota in attacking patent trolls.

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## USPTO Success Rate 50-80%

One key statistic that can help inventors when deciding whether to pursue a patent, and in selecting a patent attorney or agent to write the patent, is the expected outcome. Unfortunately, most law firms do not post their success rates. However, the USPTO does compile overall statistics that can give inventors an idea of the likelihood of getting a patent using an average patent attorney.

In a 2013 USPTO Economic Working paper (No. 2013-2), the authors (Carley, Hedge, and Marco) followed the prosecution histories of over 2 million new patent applications filed at the US Patent and Trademark Office between 1996 and 2005 to calculate patent allowance rates. They found that 55.8% of the applications emerged as patents without using continuation procedures to spawn related applications. The success rate of applications decreased substantially from 1996 to 2005, particularly for applications in the "Computers and Communications" fields. Applications filed by large firms were more likely to emerge as patents than those filed by small firms.

The USPTO's overall allowance rate has varied between a low of 50% in 2009 to a high of 80% in 2000, and is currently at 70%.

## 90% Success Rate

Overall, 90% of the patents I have written have been allowed. I have 524 issued patents, including continuations and divisionals, but have lost only 61 cases in 22 years. When looking at only original cases, excluding continuations and divisionals, I have 484 Issued cases and 55 lost cases, again a 90% success rate.

Three patents required a continuation before being allowed, and several others were divided into two separate patents allowed by the examiners.



Occasionally I take over patents written by a law firm or client. I do not count these cases since I did not write them. These cases written by others have only a 61% success rate. I believe that my higher success rate is due to writing a more comprehensive specification that is better focused on the novelty of the invention.

My current 90% success rate is consistent with the last two times I calculated my statistics, in 2006 and in 1997. From 1994 to 2006, my success rate was higher, at 95%, and from 1994 to 1997 my success rate was lower, at 84%.

## Public Libraries Offer Patent Search Help

Several public libraries across the country have a Patent & Trademark section, usually in the central or downtown library. For example, both Minneapolis and Sunnyvale now have patent librarians.

The Patent Office sponsors these local libraries by providing special computer terminals that are equipped with the search tools used by patent examiners in Washington D.C. These tools are considered to be superior to search websites on the internet. Seminars and personal support are offered to inventors at no charge.

## Multi-View Patent

My informal "Patent of the Year" is shown on the next page. Multi view images are generated with reduced flickering.

When stereo-matching is poor or varies too much from frame to frame, disparity fallback selects a second depth map that is generated from a single view without stereo-matching, preventing stereo-matching errors from producing visible artifacts or flickering. Flat or textureless regions use the second depth map, while regions with good stereo-matching use a first depth map. Hybrid view synthesis uses forward mapping for smaller numbers of views, and backward mapping from the forward-mapping results for larger numbers of views

The inventors are from beautiful Hong Kong. Congratulations to the inventors !



US009407896B2

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

(10) **Patent No.:** **US 9,407,896 B2**  
(45) **Date of Patent:** **Aug. 2, 2016**

(54) **MULTI-VIEW SYNTHESIS IN REAL-TIME WITH FALLBACK TO 2D FROM 3D TO REDUCE FLICKER IN LOW OR UNSTABLE STEREO-MATCHING IMAGE REGIONS**

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2012/0113219 A1 5/2012 Chang et al.  
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2013/0136339 A1 5/2013 Moon et al.

(71) Applicant: **Hong Kong Applied Science & Technology Research Institute Company Limited, Hong Kong (HK)**

**OTHER PUBLICATIONS**

(72) Inventors: **Che Yuen Brian Lam, Hong Kong (HK); Wei Lun Alan Cheung, Hong Kong (HK)**

Stefano Mattocchia, "Stereo Vision: Algorithms and Applications", DEIS University of Bologna, May 11, 2012.  
Scharstein & Szeliski, "A Taxonomy and Evaluation of Dense Two-Frame Stereo Correspondence Algorithms", International Journal of Computer Vision (IJCV), Apr. 2002, vol. 47, Issue 1-3, pp. 7-42.  
Qingqing Wei, "Converting 2D to 3D: A Survey", Information and Communication Theory Group (ICT), Delft University of Technology, the Netherlands, Dec. 2005.

(73) Assignee: **Hong Kong Applied Science and Technology Research Institute Company, Limited, Hong Kong (HK)**

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 375 days.

\* cited by examiner

(21) Appl. No.: **14/222,893**

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(65) **Prior Publication Data**  
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(57) **ABSTRACT**

(51) **Int. Cl.**  
**H04N 13/00** (2006.01)  
**G06T 15/00** (2011.01)

Multi view images are generated with reduced flickering. A first depth map is generated from stereo images by stereo-matching. When stereo-matching is poor or varies too much from frame to frame, disparity fallback selects a second depth map that is generated from a single view without stereo-matching, preventing stereo-matching errors from producing visible artifacts or flickering. Flat or textureless regions can use the second depth map, while regions with good stereo-matching use the first depth map. Depth maps are generated with a one-frame delay and buffered. Low-cost temporal coherence reduces costs used for stereo-matching when the pixel location selected as the lowest-cost disparity is within a distance threshold of the same pixel in a last frame. Hybrid view synthesis uses forward mapping for smaller numbers of views, and backward mapping from the forward-mapping results for larger numbers of views. Rotated masks are generated on-the-fly for backward mapping.

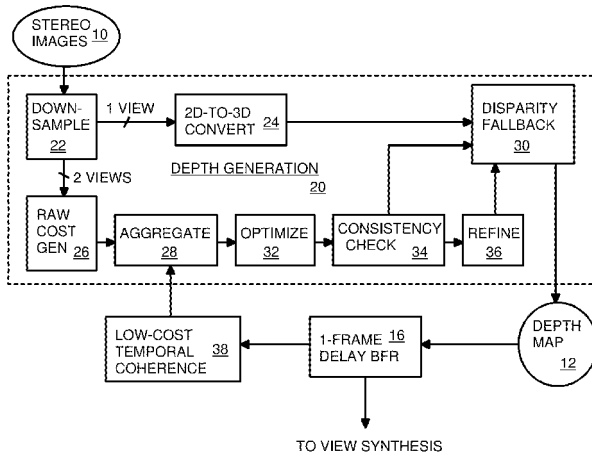
(52) **U.S. Cl.**  
CPC ..... **H04N 13/0022** (2013.01)

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

(56) **References Cited**  
U.S. PATENT DOCUMENTS

**20 Claims, 19 Drawing Sheets**

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8,009,897 B2 8/2011 Xu et al.  
8,340,397 B2 12/2012 Jeon et al.  
8,384,763 B2 2/2013 Tam et al.



## Easy-to-Remember Gmail Address:

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## 514 Patents Issued

After 22 years of writing patents as a full-time Patent Agent, 514 applications that I've written have now issued as patents. Congratulations inventors!

You can view the 514 issued patents I've written at:

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

## Rates Set for 2017

My hourly rate for 2017 will be \$260 per hour, billed in quarter-hour increments. Fixed-price quotes are available for patent applications to facilitate budgeting and avoid expensive surprises.

Prosecution work such as amendments and other paperwork is billed at the hourly rate. Litigation-support work is billed at a higher rate. Patent searches are billed at a flat \$500 for U.S. abstract searches. Patents can be viewed on-line.

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**Address Correction Requested**