

Computer Implemented Inventions

Views From a Global High-Tech Innovator

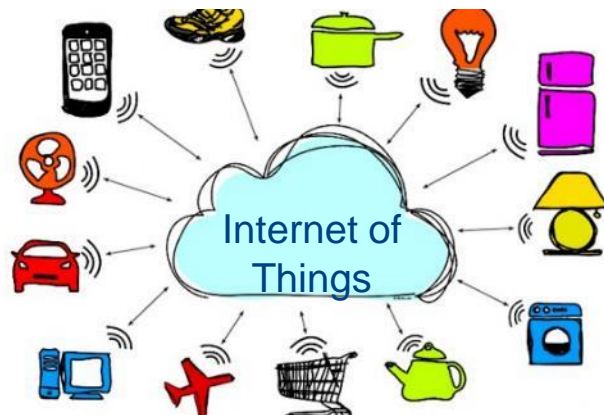


Monica Ailt

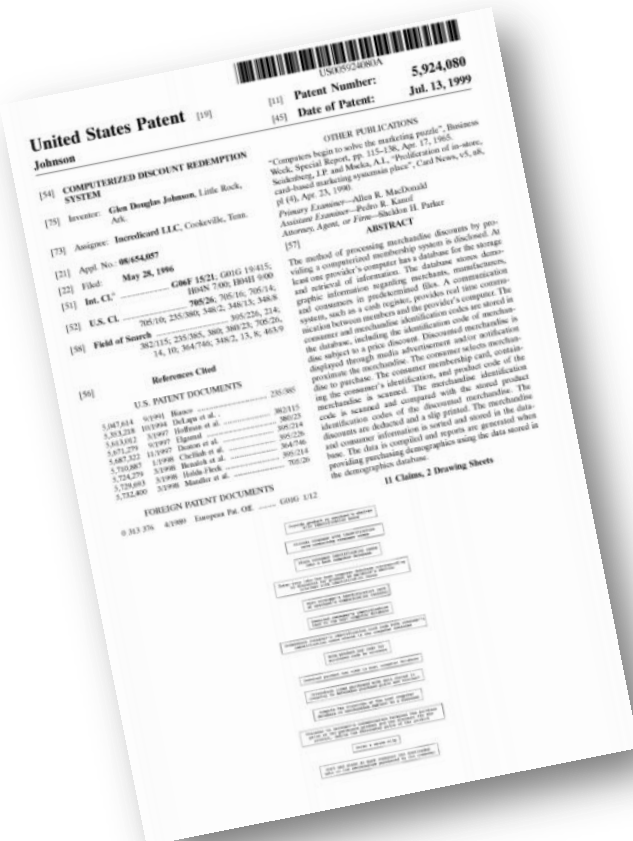
Diretora Jurídica Intel America Latina



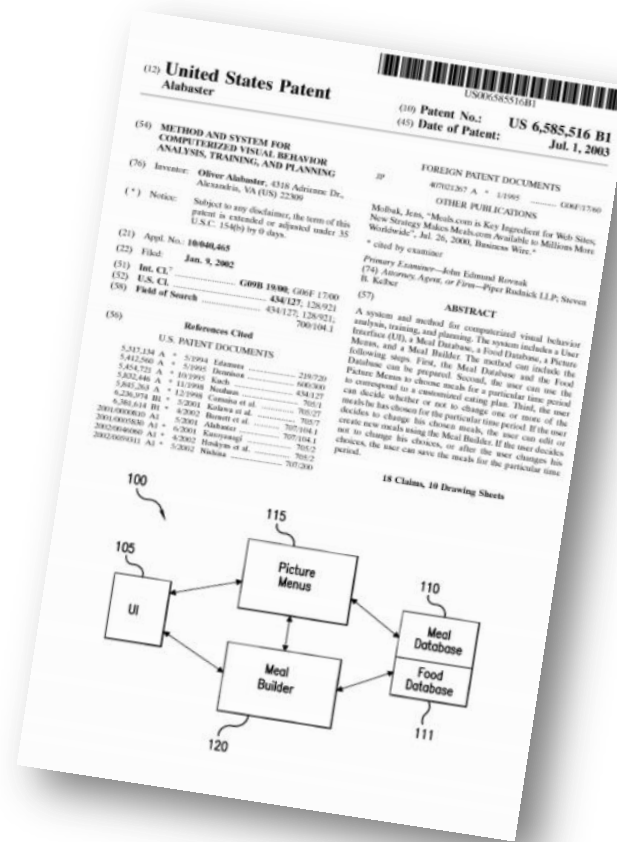
Computer Implemented Inventions Play An Important Role In Our Smart, Connected World



But Without Careful Examination, Invalid Patents Can Be Granted



US Pat No 5,924,080 -- invalid as abstract idea of collecting and storing information for membership discount program



US Pat No 6,585,561 – invalid as abstract idea of using picture menus in a database to plan meals

And Data Indicates A High Number Of Invalid Patents Are Granted

German Study *March 2015*

- Courts fully or partially invalidate patents 75% of the time, which is “a conservative estimate” of German patents that are fully or partially invalid

U.S. Statistics *June 2016*

- PTO instituted in 50% of filed petitions, and of those instituted, 54% of trials resulted in fully or partially invalid patents

Why most patents are invalid – Extent, reasons, and potential remedies of patent invalidity

March 24, 2015

Draft, comments welcome

Joachim Henkel^{a,b}, Hans Zischka^a

^aTUM School of Management, Technische Universität München
Arcisstr. 21, 80333 Munich, Germany. henkel@wi.tum.de, zischka@wi.tum.de. +49 89 289 25741
^bCenter for Economic Policy Research (CEPR), London, United Kingdom

Abstract: The legal stability of granted patents is uncertain, a fact that entails inefficiencies for the patentee as for third parties. It is an important question for intellectual property policy and management how severe this problem is. Few patents are litigated, and those that are not a random selection. We thus ask: if a randomly picked patent underwent revocation proceedings, what would be the odds of it being invalidated? We address this question for the case of Germany, where revocation proceedings are separate from infringement suits. Based on court decisions, expert interviews, and a survey among patent lawyers, we find that patents entering revocation proceedings are about as legally robust as the average patent. However, less than half of all revocation proceedings conclude with a decision, and those that do involve more robust patents. Thus, the share of court decisions that declare the patent in suit partially or fully invalid—in Germany, 75% for 2000 to 2012 and 78% for 2010 to 2012—is a conservative estimate of the share of all patents that would be partially or fully invalidated if challenged in court. An econometric analysis of 301 court decisions between 2010 and 2012 supports this finding, predicting for a sample of randomly drawn patents a share of (partial or full) invalidation of 83%. We show that our arguments carry over to other legislations. While we concur with earlier studies that a more detailed examination would not solve the problem, we do not consider “rational ignorance at the patent office” a satisfactory explanation since also patents that are never litigated create inefficiencies. To address the problem that many patents are latently invalid we suggest a significant increase of the required inventive step in the examination process combined with a lower inventive-step standard in litigation.

Keywords: Patent, Patent Validity, Patent Invalidation, Inventive Step

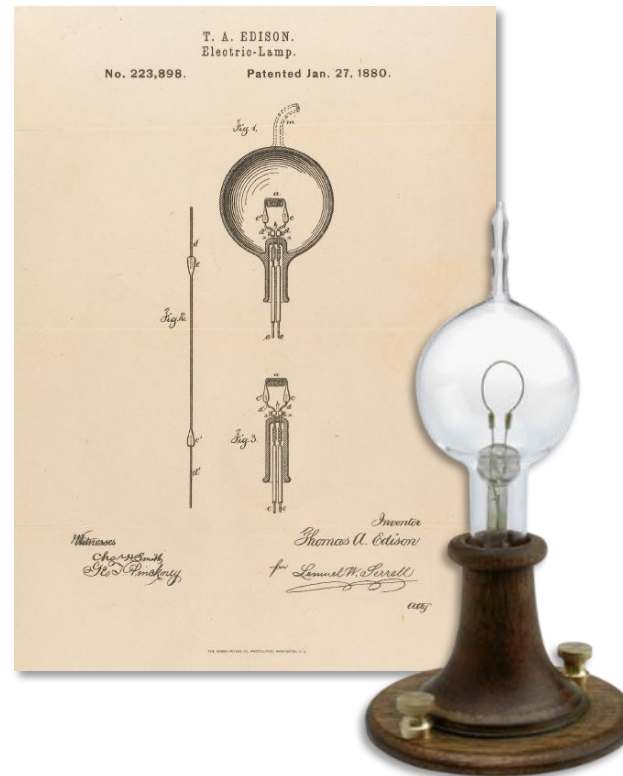
Acknowledgments: We thank our interview partners and survey participants for their time and valuable input to this study. We are also grateful to Ove Granstrand, Dietmar Harhoff, Mike Meurer, Andrew Torrance, and conference participants at the Berkeley Center for Law and Technology, Boston University School of Law, Chalmers University, and Max Planck Institute for Innovation and Competition for providing helpful comments. All errors are our own.

High Patent Quality Is Critical, Especially As The Nature and Pace of Innovation is Changing



**50B by 2020
connected devices**

Early Products Practiced Only A Few Patents, Making The Product Essentially Equal To The Patent

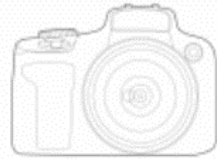


U.S. 223,898 Patent (Jan. 1880): Thomas Edison's "Electric Lamp"

Today's High-Tech Products Are Different: They Practice Many Patents and Implement Many Technologies



Telephone



Camera



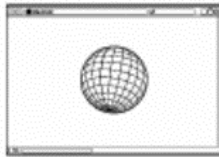
Clock



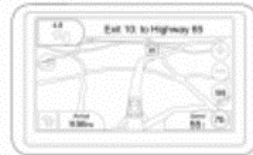
DVD Player



Computer



Internet



GPS/Map



Typewriter



Flash Light



TV



Music Player



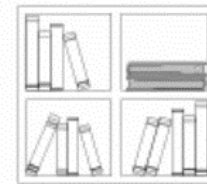
Newspaper



Video Games



Calculator



Library

Animation: Click to Play

As The Pace and Nature of Innovation Evolves, Our Patent Systems Must Evolve Also

It must:

- **Ensure High Quality Patents** for all inventions, including computer implemented inventions
- **Provide Proportional Remedies** in an era where products incorporate many different inventions
- **Focus on Maximizing Innovation** through balanced patent systems (and recognize the difference between innovation and patents)



