

# Patent Points

NOW STARTING MY 26<sup>TH</sup> YEAR...

## Patent Issues in only 6 Months !

US Patent 10,454,462 was filed on April 18, 2019 and issued on October 22, 2019, a pendency of 6 months and 4 days. Patents typically take 2-3 years to issue, so this was exceptionally fast.

It was not a simple technology either. The patent's title is "50% Duty Cycle Quadrature-In and Quadrature-Out (QIQO) Divide-by-3 Circuit". Just last year, we had another patent issue in 6 months, also in the DSP field.

Why so fast ? Filing with formal drawings, submitting prior art at filing, and having a full set of 20 claims, but not more than 20 claims, helps the Patent Examiner to quickly understand the invention. Sometimes examiners look through their docket of assigned patents and choose the easiest ones to work on, especially near the end-of-quarter when their pay raises are determined in part by the number of patents they processed.

Congratulations Inventors !

## 200M\$ Payoff

In late 2019, a Texas jury awarded \$200 Million over patents that allow customers to photograph and then deposit checks. Mobile check deposit is very convenient since the customer does not have to mail the check or visit the bank branch. Wells Fargo Bank was ordered to pay patent owner USAA \$200 Million in damages. Patent owner USAA is itself a large banking/investment firm and is looking to receive royalties from other banks. Since mobile banking is already widely used today, the patent owner could reap significant rewards. Many patent lawsuits are filed in Texas because Texas courts have a reputation for being the most pro-patent courts in the US, and the current award will add to that reputation.

Wells Fargo responded to the big loss by filing for a review of the patents by the appeal board at the USPTO. This appeal board, known as the PTAB, tends to invalidate patents at a shockingly high rate. As much as 3 out of 4 final decisions by the PTAB invalidate the patent.

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## Patent Database

A newly updated database lists patents that have been sold or are being sold.

<https://portal.unifiedpatents.com/>

This database contains a wealth of data on patent families, court filings and decisions, and patent transactions.

## Patent ASK Prices Up

Asking prices of patents for sale increased by 56% in 2019, from 124K\$ to 194K\$ per asset, with issued US patents increasing from 177K\$ to 280K\$, a slightly larger 58% increase. This data was reported by Richardson Oliver Insights LLC, a patent data analytics company.



## Crowdsourcing Defeats Patent Troll

Non-Practicing Entities (NPE's), aka Patent Trolls, are shell companies that hold patents to sue others but do not make any products themselves. Since they do no manufacturing, they are immune from patent infringement countersuits. Thus, the legal odds are tilted in their favor.

Blackbird Technologies, a patent troll with a rather appropriate name, sued Cloudflare, an internet company, over a basic proxy-server patent. Rather than pay a licensing fee, Cloudflare offered cash bounties to the public for help in finding prior art. They distributed 25 K\$ among 18 people in the crowdsourcing effort. Some of their customers came to their aid while others were curious as to why a patent was granted for well-known technology. The prior-art patents found by the crowdsourcing effort helped the company to prevail in litigation.

However, the effort did not stop there. Cloudflare offered and paid another 30 K\$ for prior art to invalidate other patents owned by the patent troll. Cloudflare preemptively filed to invalidate these other patents. Now the patent troll's headcount has dropped sharply as their patent portfolio value plunges.

## Patent Highway

If you file a patent in more than one country, such as the US and China, you can accelerate your slower application using the Patent Prosecution Highway (PPH). Once the faster country sends an allowance of at least one claim, Fast-Track examination can be requested in the slower country.

In the USPTO, you enter the PPH by filling out a 2-page form, listing the faster country's application number and date of allowance, and fill in a table showing how the claims correspond in the two applications. Also, an English translation of the allowance papers may be needed, along with an Information Disclosure Statement (IDS) for any cited references.



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(12) **United States Patent**  
**Chan**

(10) **Patent No.:** **US 10,454,462 B1**  
(45) **Date of Patent:** **Oct. 22, 2019**

(54) **50% DUTY CYCLE QUADRATURE-IN AND QUADRATURE-OUT (QIQO) DIVIDE-BY-3 CIRCUIT**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(51) **Int. Cl.**  
**H03K 5/00** (2006.01)  
**G06F 1/06** (2006.01)  
**H03K 19/094** (2006.01)  
**H03K 17/687** (2006.01)

(52) **U.S. Cl.**  
CPC ..... **H03K 5/00006** (2013.01); **G06F 1/06** (2013.01); **H03K 17/687** (2013.01); **H03K 19/094** (2013.01)

(58) **Field of Classification Search**  
CPC ..... H03K 5/00006; H03K 17/687; H03K 19/094; G06F 1/06  
USPC ..... 327/115, 117, 118  
See application file for complete search history.

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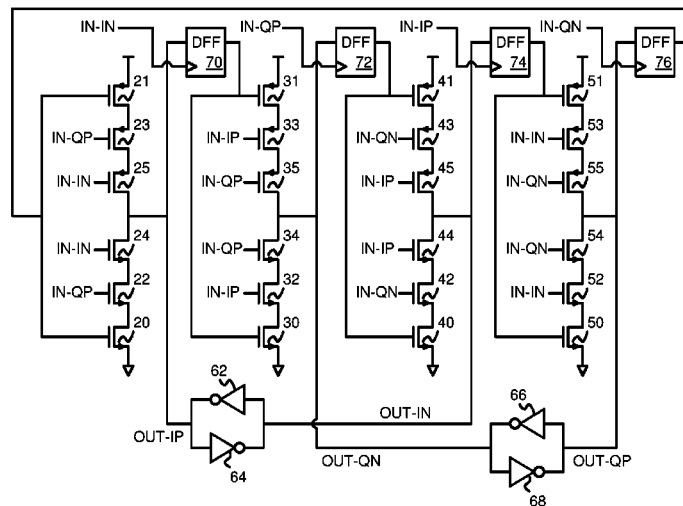
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(57) **ABSTRACT**

A Quadrature-In, Quadrature-Out (QIQO) clock divider divides by an odd divisor, such as three. An IQ input clock has in-phase and quadrature differential signals. Four stages of dynamic logic are arranged into a loop, with each stage output being one of four IQ output signals that have 90-degree phase separations. Each stage output drives the gates of a p-channel charging transistor and an n-channel discharging transistor of a next stage. Two p-channel charging logic transistors are in series between the next stage output and the p-channel charging transistor, and two n-channel evaluation transistors are in series between the next stage output and the n-channel discharging transistor. Different pairs of the four IQ input clock signals are applied to their gates. When the prior stage output is low, the stage output is charged. When the prior stage output is high, the stage output discharge timing is determined by the IQ signals.

**20 Claims, 11 Drawing Sheets**



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## 540 Patents Issued

After 25 years of writing patents as a full-time Patent Agent, 541 applications that I've written have now issued as patents. Congratulations inventors!

You can view the 541 issued patents I've written at:

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

## Rates Set for 2020

My hourly rate for 2020 will be \$290 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**