

Patent Points

NOW STARTING MY 27TH YEAR...

Patent Issues in under 5 Months !

US Patent 10,785,074 was filed on April 29, 2020 and issued on September 22, 2020, a pendency of less than 5 months. Patents typically take 2-3 years to issue, so this was amazingly fast.

The patent's title is "Cross-Product Detection Method for a Narrowband Signal Under a Wide Range of Carrier Frequency Offset (CFO) using Multiple Frequency Bins". It was not a simple technology. In the last few years, we had a few patents issue in 6 months.

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 !

How to Get Your Patent 6 Mo. Faster

If you file a patent in more than one country, such as the US and China, or if you use the Patent Cooperation Treaty (PCT) separate from your US filing, 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.

PPH Results

We have filed 9 cases with Patent Prosecution Highway (PPH) Requests that have been granted. Of these 9 PPH cases, 6 have received first action allowances, and 1 had claims allowed at first action and later received a second action allowance. The remaining 2 cases have been waiting about a year since the PPH grant without any office action.

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The average time from filing to allowance for these 7 successful cases was **9.3** months.

The previous 10 cases filed without PPH requests averaged **14.8** months from filing to allowance, for the 10 cases with first action allowances or with allowed claims.

Although this is a small sample size, the data suggests that PPH requests have reduced pendency to allowance by **5.5** months, or almost half a year.

Also, since the samples cover different time periods, it is possible that the US patent office has reduced processing delays.

The USPTO is reporting that pendency to first action is currently 15 months. This was a decrease in pendency of 0.8 months from 2018 to 2019/20. So, the improvement due to PPH may be 0.8 of a month less, maybe **4.7 months** rather than 5.5 months.

Still, having your patents issue 4-6 months faster is a welcome improvement, especially for emerging technologies where first-mover advantages are highly valued.

PPH Patent Highway

In the USPTO, you enter the PPH by filling out a 2-page form, listing the faster country's application number and date of the office action, and fill in a table showing how the claims correspond in the two applications. Also, an Information Disclosure Statement (IDS) must be submitted for any cited references, along with a copy of the foreign office action. For the PCT, a Preliminary Examination that lists claims as allowable can be used.

There are several tricks to doing the PPH request correctly. The claims must match almost exactly with the foreign and US applications. Grouping claims will cause the PPH request to be rejected – the claims must be listed individually on the PPH form.

If only some of the claims are allowed in the foreign or PCT application, then the PPH will not be accepted unless the US claims are amended, which is typically not worth doing.

An English translation of the allowance papers may be needed, but this rule has not been enforced against us yet.

Patent of the Year

My informal "Patent of the Year" is shown on the next page. A panoramic video stream of spherical images is compressed. Portions of the image are moved to upper corners of a rectangular bounding box around the pseudo-cylindrical projection image that do not have active image pixels. These corners are non-effective areas of default dark pixels with no image pixels. Each image is compressed by 33% without loss of real image data.

Congratulations to the inventor !





US010735765B2

(12) **United States Patent**
Shen

(10) **Patent No.:** **US 10,735,765 B2**

(45) **Date of Patent:** **Aug. 4, 2020**

(54) **MODIFIED PSEUDO-CYLINDRICAL MAPPING OF SPHERICAL VIDEO USING LINEAR INTERPOLATION OF EMPTY AREAS FOR COMPRESSION OF STREAMED IMAGES**

(56) **References Cited**

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ISR and Written Opinion, PCT/CN2018/090708, dated Feb. 27, 2019.
Office Action, SIPO, Chinese Patent APN 201880000751.X, dated May 11, 2020.

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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 201 days.

(21) Appl. No.: **16/002,165**

(22) Filed: **Jun. 7, 2018**

(65) **Prior Publication Data**
US 2019/0379910 A1 Dec. 12, 2019

(51) **Int. Cl.**
H04N 19/597 (2014.01)
H04N 13/161 (2018.01)
(Continued)

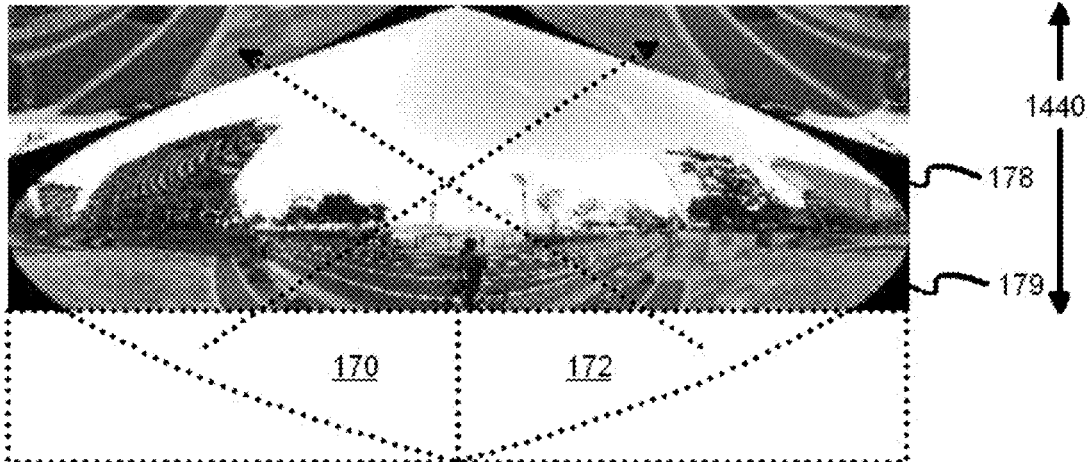
(52) **U.S. Cl.**
CPC *H04N 19/597* (2014.11); *G06F 3/012* (2013.01); *G06T 3/0062* (2013.01); *H04N 13/161* (2018.05); *H04N 19/423* (2014.11)

(58) **Field of Classification Search**
CPC .. H04N 19/597; H04N 19/423; H04N 13/161; G06F 3/012; G06T 3/0062
See application file for complete search history.

(57) **ABSTRACT**

A panoramic video stream is compressed. Sinusoidal projection is performed on spherical input images to generate pseudo-cylindrical projection images. A lower-left region and a lower-right region of the image are cut and moved to upper corners of the rectangular bounding box around the pseudo-cylindrical projection image. These upper corners are non-effective areas of default dark pixels with no image pixels. A bottom one-third of the rows of pixels from the image that contained the moved regions are deleted, compressing the image by 33%. Default dark pixels in interface regions between the moved regions and the pseudo-cylindrical projection image are linearly interpolated to provide gradual changes in pixel values across the remaining formerly non-effective regions, preventing encoding artifacts caused by abrupt changes in pixel values. Functions may be implemented using lookup tables. Non-focus image areas may be downsampled for additional compression using multi-resolution mapping and adaptive view streaming.

20 Claims, 17 Drawing Sheets



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556 Patents Issued

After 26 years of writing patents as a full-time Patent Agent, 556 applications that I've written have now issued as patents. Congratulations inventors!

You can view the 556 issued patents I've written at:

www.gpatent.com

Rates Set for 2021

My hourly rate for 2021 will be \$300 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