
Albert supports that
Yoshi had the Pinned Photodiode idea
before Teranish 1980 Patent.

FROM: hagiwara [mailto:hagiwara-yoshiaki@aiplab.com]

SENT: Tuesday, July 10, 2018 3:19 PM

TO: 'a.theuwissen'

SUBJECT: RE: NEC-SONY Patent War

> Hi, Albert,
>
> how are you ?
> I am very mad at Fossum's 2014 paper
> which I found just a few weeks ago.
> I am now 70 years and completely retired..
> Fossum did not quote the very important
> Pain's work at JPL CalTech
> on the Global Shutter CMOS image sensor ...
>
> Yoshi

On Tue, 10 Jul 2018 18:24:23 +0900, hagiwara wrote:

> Albert,
>
> I am sorry my previous e-mail title was in Japanese,
> copying to many unrelated people.
> But they are also my friends.
> I am re-sending with more information
> on the Pain's paper.
> You know, I was also a visiting professor
> at CalTech during 1998 to 1999
> and frequently visiting Pain's Lab at JPL,
> CalTech during the period.
> I remember Pain and his team really hated
> Fossum at that time.
> I recall they called Fossum a thief.
> Kind regards
>
> Yoshi

From: albert theuwissen

Sent: Tuesday, July 10, 2018 6:55 PM

To: hagiwara-yoshiaki@aiplab.com

Re: How are you ? from Yoshi of Sony(Hagiwara180710)

Dear Yoshi,

Good to hear from you, although it is not all good news you are sending to me.

Can you tell me the reference of the Pain paper ?

When and where was it published ?

Very interesting information !!

At the time Fossum started to write the overview paper about the PPD, he asked me to become a co-author and to help him out with the paper.

After some doubt I declined his invitation, because I do know that the discussion about the inventor of the PPD is very sensitive,

and I do agree with you that the structure you developed is indeed a PPD, maybe not called that way at that time and also invented for some other purpose.

But it still remains a PPD !

At Philips, in the late '70s a very similar structure was implemented in the CCDs, this was before I joined Philips in 1983.

So yes, there were several p⁺/n⁻/p⁻ structures known by the time that Teranishi issued his patent.

I fully agree to that.

Looking forward to hear from you,

Regards,

Albert.