

# **EXHIBIT H Part 1**

# **Carnegie Mellon University's Presentation on Laches - Dkt. 802**

May 1 – 2, 2013



**Carnegie Mellon**

## **Laches is an Equitable Defense and is Not Available When the Equities Favor the Plaintiff**



**Laches “is an equitable defense, controlled by equitable considerations, and the lapse of time must be so great, and the relations of the defendant to the rights such, that it would be inequitable to permit the plaintiff to now assert them.”**

*Adv. Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 988 F.2d 1157, 1162 (Fed. Cir. 1993)  
(citing *Halsted v. Grinnan*, 152 U.S. 412, 417 (1894))



**If the defendant establishes the factual predicates to laches, the court then “weighs the equities in order to assess whether laches should apply to bar those damages that accrued prior to suit.”**

*State Contracting & Eng'g Corp. v. Condotte Am., Inc.*, 346 F.3d 1057, 1065 (Fed. Cir. 2003)

### **■ The equities here favor CMU:**

- **Marvell was aware of CMU’s patent by January of 2002, but continued infringing**
- **Marvell ignored CMU’s inquiry (made in 2003, within the six-year laches period)**
- **CMU had no way of knowing of Marvell’s infringement, due to Marvell’s secrecy**
- **Even after litigation began, Marvell concealed key facts and has continued infringing to this day**

## **Marvell Has Not Proven Laches**

**Marvell is not entitled  
to a presumption of laches**

**Marvell has not proven that CMU  
unreasonably delayed in filing suit**

**Marvell has not proven either  
economic or evidentiary prejudice**

**Marvell's egregious misconduct further  
tilts the equities in CMU's favor**

## Marvell is Not Entitled to a Presumption of Laches



The law affords infringers a rebuttable presumption that a patentee's delay is unreasonable and prejudicial, but **only if** the infringer shows that the patentee “knew or reasonably should have known” of the infringement more than six years prior to filing suit.

*Ultimax Cement Mfg. Corp. v. CTS Cement Mfg. Corp.*, 587 F.3d 1339, 1349-50 (Fed. Cir. 2009)



Even if the infringer proves a delay of six or more years, **evidence raising a genuine dispute** as to either delay **or** prejudice “bursts” the presumption, requiring the infringer to prove both elements.

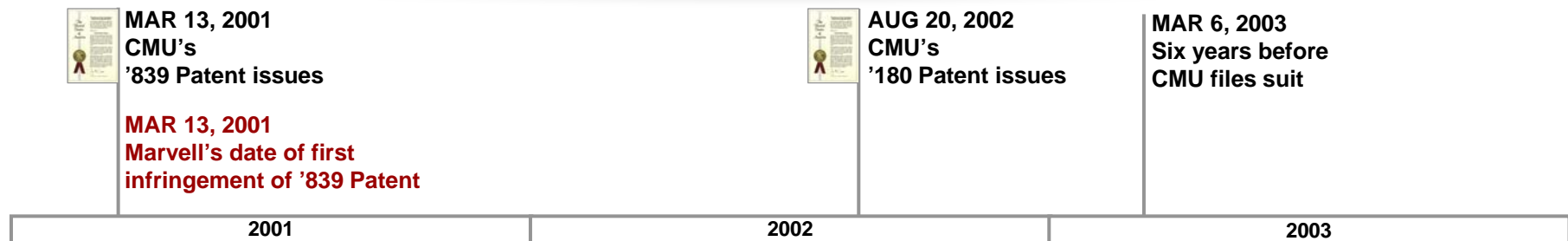
*Hemstreet v. Computer Entry Sys. Corp.*, 972 F.2d 1290, 1293 (Fed. Cir. 1992)

# Marvell is Not Entitled to a Presumption of Laches



**The laches period cannot begin to run until the patent issues and infringement begins.**

See, e.g., *Meyers v. Brooks Shoe, Inc.*, 912 F.2d 1459, 1462 (Fed. Cir. 1990) (overruled in part on other grounds by *A. C. Aukerman Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020, 1038-39 (Fed. Cir. 1992)); see also *Beam Laser Sys., Inc. v. Cox Commc'ns, Inc.*, 144 F. Supp. 2d 464, 469-70 (E.D. Va. 2001)



- The laches clock cannot start ticking prior to March 13, 2001
- Marvell is entitled to a presumption of laches **only if**:
  - CMU had knowledge of facts that would have put it under a duty of inquiry at some point between **March 13, 2001 and March 6, 2003, and**
  - CMU's reasonable inquiry would have led it to **actual or constructive discovery of Marvell's infringement**
- Marvell's evidence fails on both counts

## Marvell is Not Entitled to a Presumption of Laches

- ***No evidence*** that CMU had actual knowledge of Marvell's infringement prior to litigation, let alone, prior to March 6, 2003
- ***No evidence*** that CMU could have determined whether Marvell was infringing without access to Marvell's documents and engineers
  - Other than (possibly) the '585 patent, Marvell did not identify a single publicly available document that shows how its circuits work

## Marvell is Not Entitled to a Presumption of Laches



**Marvell's theory on the presumption of laches (and on unreasonable delay) rests on its assertion that:**

- CMU was required to demand access to Marvell's documents and engineers, and
- Marvell would have complied with CMU's demands

no allegation of infringement) to Marvell (along with the rest of the industry).<sup>3</sup> But *reasonable* diligence in this case required CMU to either raise or else investigate its infringement concerns with Marvell. Besides being inadequate, CMU's inquiry with Seagate about Marvell's chips was

Here, CMU never directly inquired about Marvell's suspected infringement or how its chips operate and thus cannot now assert that such an inquiry would have been futile. Moreover,



## Marvell is Not Entitled to a Presumption of Laches



If a patentee knows **facts** that would “put upon a man of ordinary intelligence the duty of inquiry,” the patentee is “chargeable with such knowledge as he might have obtained upon inquiry.”

*Adv. Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 988 F.2d 1157, 1162 (Fed. Cir. 1993);  
*Wanlass v. Gen. Elec. Co.*, 148 F.3d 1334, 1338 (Fed. Cir. 1998)



The duty of inquiry, if it exists, only requires a patentee to “make **such inquiry and investigation as the circumstances reasonably suggest.**”

*Wanlass v. Gen. Elec. Co.*, 148 F.3d 1334, 1338 (Fed. Cir. 1998)



Where the facts known to the patentee do not establish a duty of inquiry, **or** where the patentee meets its duty but **does not discover or could not discover the infringement**, constructive knowledge does not exist and the laches clock does not start ticking.

See *Adv. Cardiovascular Sys. Inc. v. Scimed Life Sys., Inc.*, 988 F.2d. 1157, 1162 (Fed. Cir. 1993);  
*Wanlass v. Fedders Corp.*, 145 F.3d 1461, 1467 (Fed. Cir. 1998)

## Marvell is Not Entitled to a Presumption of Laches

CMU was not under a duty to inquire at any time prior to March 6, 2003

- The 1998 email between Dr. Kavcic and Nersi Nazari
  - During Dr. Kavcic's 1998 interview with Marvell, *Dr. Nazari affirmatively told him that Marvell was not using his invention*
  - *Dr. Nazari's statement was true* – Marvell's infringement did not begin until March 2001
- Dr. Moura's May 2001 meeting notes
  - The evidence shows that CMU had no basis to know that Marvell had infringed
- Marvell's need for the CMU invention was never disclosed publicly and was not even written up internally until 2002 – well after the date of Dr. Moura's meeting notes

## Marvell is Not Entitled to a Presumption of Laches



**Marvell ignores the evidence that CMU did not and could not have known of Marvell's infringement in May 2001**

**MAR 13, 2001**  
Burd simulates  
"Kavcic Method"  
covered by  
'839 patent

**MAR 23, 2001**  
Burd reports  
that initial work  
with "Kavcic's  
media noise  
detector" was  
"*disappointing*"

**APR 13, 2001**  
Kavcic sends  
to Moura list  
of contacts  
at chip makers,  
including  
Marvell

**MAY 16, 2001**  
Moura meeting notes  
reflecting CMU discussion  
about promoting the  
Kavcic-Moura invention

**MAY 17 and 30, 2001**  
Dr. White writes to Seagate  
and IBM informing them  
of the CMU patent and  
asking them to adopt the  
technology in the future

**JUN 12, 2001**  
Burd writes up his  
non-linear single  
bit post-processor  
to address media  
noise (Marvell later  
abandons this  
approach)

**DEC 21, 2001**  
Burd completes  
his infringing  
"KavcicPP"  
media noise  
detector

2001

# Marvell is Not Entitled to a Presumption of Laches



**Marvell ignores the evidence that CMU did not and could not have known of Marvell's infringement in May 2001**

**Marvell first used the CMU invention in March 2001 – but found it “disappointing”**

**From:** Greg Burd  
**Sent:** Friday, March 16, 2001 5:35 PM  
**To:** Toai Doan  
**Subject:** weekly status report

Chasing a mysterious bug in iterative simulator. Every now and when I get a sector which is totally corrupted (more than 2k bit errors). I think something goes wrong during the data exchange between matlab and C++, perhaps there is a naming convention conflict. The problem have not occurred after I renamed some variables, however I am not absolutely sure that the bug is gone all together. Run small set of simulations for Viterbi detector with BM calculated as  $(y - \hat{y})^2 / \text{var} \cdot \log(\text{var})$ . We should expect about 0.5 dB gain (assuming that the

**I started working on the Kavcic's model. I think it would be a good starting point to implement it into the simulator.**

**I started working on the Kavcic's model. I think it would be a good starting point to implement it into the simulator.** The case described in the previous bullet would then become a special case of Kavcic's model. This would also give us a lower bound on the gains which can be achieved for media noise.  
 greg

**From:** Greg Burd  
**Sent:** Friday, March 23, 2001 5:22 PM  
**To:** Toai Doan  
**Subject:** weekly status report

Worked on Implementing Kavcic's media noise detector. I got it debugged and running. However, using our media noise model, the results have been disappointing.

**However, using our media noise model, the results have been disappointing.**

by signal squared in the last give back to 0. I think that the media noise model which we use can be the reason for not seeing any sizable gains when using more complicated Viterbi detector in the presence of moderate amount of media noise. Basically at each transition we introduce a random jitter noise, i.e. there is no non-random media component which the detector can take advantage of. It seems that next thing we should do is to collect lots of real drive data and see what kind of media noise model one should use. Added the code to collect error event probabilities to our simulator. Also got some error event statistics using analytical model.

greg

P-227

DX-1060

## Marvell is Not Entitled to a Presumption of Laches

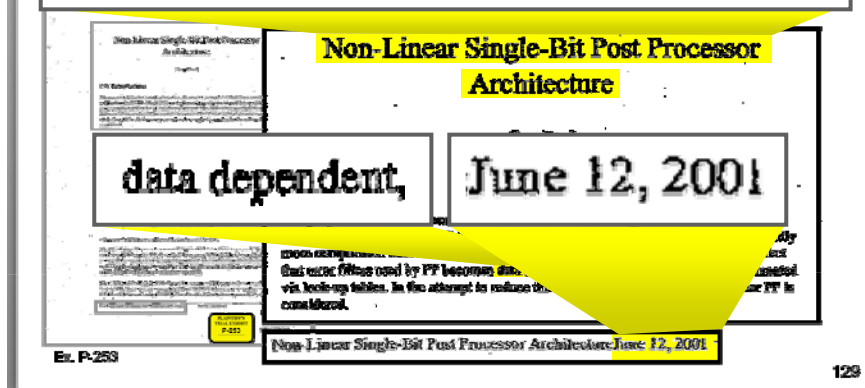


**Marvell ignores the evidence that CMU did not and could not have known of Marvell's infringement in May 2001**

**After “disappointing” initial results with the CMU invention, Marvell investigated possible alternatives:**

### Marvell Had No Alternatives to the CMU Patents

**In 2000–2002 Time Period, Marvell Considered but Rejected  
Non-Linear Single-Bit Post Processor  
Architecture**



Q. What — let me direct your attention, sir, to P253, which is on Slide 129. Did you — what does Exhibit P253 show?

A. This is a, a document called, nonlinear single bit post processor architecture. So, this is something written by Mr. Burd.

Q. Did Marvell ever implement this nonlinear single bit post processor architecture?

A. No.

Dr. McLaughlin, 12/3/12 Tr. at 191:7-15

P-Demo 7 at p. 129

# Marvell is Not Entitled to a Presumption of Laches



**Marvell ignores the evidence that CMU did not and could not have known of Marvell's infringement in May 2001**

May 16/2001

Casay; Horatio  
Bob White  
Dorian; Alex (by phone)

How to influence manufacturers - what  
would it take to change chip

May 16/2001

Casay; Horatio  
Bob White  
Dorian; Alex (by phone)

What is the ~~issue~~ before printing  
recently acquired circuit - not like manufacturing one  
They don't go manufacturing chips, except IBM, but  
they do: Intel, AMD, Microsoft, TI, Intel, Infineon,  
STMicroelectronics, etc. and any other company that makes  
chips

Did TI have the business (chip manufacturing) for us  
to do for

SI Logic, Avnet, Lument, Cross Logic (buying  
off 10% of workforce).  
Renesas - similar story.

How design and manufacturing don't work then chips  
wouldn't be sold there. (manufacturers)  
Chip manufacturers will make them whether they  
want them or not.

Maybe a lawsuit should have some leverage against  
CMU.

Only one manufacturer at time of disclosure was  
IBM and daughter

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# Marvell is Not Entitled to a Presumption of Laches



**Marvell ignores the evidence that CMU did not and could not have known of Marvell's infringement in May 2001**

## Marvell ignores Dr. Kavcic's April 2001 email

Q. Is it an e-mail relating to your belief of potential infringers of the '839 patent as of April 13, 2001?

MR. GREENSWAG: Objection, mischaracterizes the document. Badly mischaracterizes the document.

A. I wouldn't say that this is something that talks about infringers at all.

Kavcic Dep. 809:10-17

As of April 2001, did you believe that any of the companies listed on the first page of Exhibit 47 may be infringing your '839 patent?

A. I don't think I believed that.

Kavcic Dep. 810:4-8

From: Aleksander Kavcic  
To: nersi@cs.cmu.edu  
Cc:  
Bcc:  
Subject: RE: patent

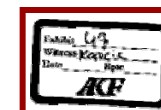
Sent: 4/13/2001 7:00 PM.

Subject: RE: patent

Jaco,

I will be in San Diego for most of next week. I will give a seminar at the San Diego magnetic recording research center. You see, they want to invite me and you still don't. I am telling you, the research I have been doing is good. Really.

Here are the companies and some contacts



Here are the companies and some contacts.

all the good researchers I know left the company

5 Lucent, I don't know who is in charge right now.

The head of the chip design group, Jeff Sonntag left and has taken several people with him

6 LSI Logic, Homert Thayer, hthayer@lsi.com

7 Marvell, Nersi Nazari, nersi@marvell.com

7 Marvell, Nersi Nazari, nersi@marvell.com


Ex. 47

## Marvell is Not Entitled to a Presumption of Laches



**Marvell ignores the evidence that CMU did not and could not have known of Marvell's infringement in May 2001**

### Letter to Seagate



**Data  
Storage  
Systems  
Center**

Robert M White  
Director  
Data Storage Systems Center  
University Professor  
Carnegie Mellon University  
5000 Forbes Avenue  
Pittsburgh, PA 15213-3890

Telephone: 412-268-6916  
Fax: 412-268-4585  
E-mail: [white@ece.cmu.edu](mailto:white@ece.cmu.edu)

DSSC #4500-0

May 17, 2001

Mark H. Kryder  
Sr. Vice President and Director

For this to happen, the major drive manufacturers must adopt it.


correlated noise. The presence of this noise is a function of the recording scheme, which I have developed. For this to happen, the major drive manufacturers must adopt it. We would appreciate your bringing this to the attention of those within Seagate who impact on magnetic recording. For this to happen, the major drive manufacturers must adopt it. We would appreciate your bringing this to the attention of those within Seagate who impact on magnetic recording.

Sincerely,

Robert M. White  
RMW/ir  
Enclosure

DX-182

### Letter to IBM



**Data  
Storage  
Systems  
Center**

Robert M White  
Director  
Data Storage Systems Center  
University Professor  
Carnegie Mellon University  
5000 Forbes Avenue  
Pittsburgh, PA 15213-3890

Telephone: 412-268-6916  
Fax: 412-268-4585  
E-mail: [white@ece.cmu.edu](mailto:white@ece.cmu.edu)

DSSC #4500-0

May 30, 2001

Thomas Albrecht  
Manager, Mechanics and Integration  
Center, MS K62-63

Alek and José feel that this detection scheme offers advantages over current detection schemes and we would like to urge IBM to consider adopting this approach.

allowing to inform you that the DSSC (actually CMU) has been assigned a patent on an invention by Alek Kavcic and José Moura dealing with a new scheme for detecting signals in the presence of correlated noise. IBM is eligible for a royalty free license to this invention. Alek and José feel that this detection scheme offers advantages over current detection schemes and we would like to urge IBM to consider adopting this approach.

Enclosures: 2

DX-185