

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION**

ROBERT E. MORLEY, JR., et al.)
)
Plaintiffs,)
)
vs.)
)
SQUARE, INC., et al.,)
)
Defendants.)

**Case No. 4:14cv172
Case No. 4:10cv2243 SNLJ
CONSOLIDATED**

and)
SQUARE, INC., et al.)
)
Plaintiffs,)
)
vs.)
)
REM HOLDINGS 3, LLC,)
)
Defendant.)

MEMORANDUM AND ORDER

Square, Inc. is a business that allows anyone with a Square account and a smartphone to take credit card payments by inserting a small, square-shaped credit card reader (“Square Reader”) into the headphone jack of a smartphone, swiping the card through the reader, and processing the card using the Square application on the smartphone. Dr. Robert Morley and his company REM Holdings 3, LLC claim that the

defendants¹ --- Square, Jack Dorsey, and Jim McKelvey --- improperly use his contributions to the defendants' "Square Reader" technology and wrongfully cut him out of the now billion-dollar business. The Counts that remain unstayed in this case pertain to plaintiffs' state law claims for joint venture, trade secret, and related claims. Defendants have moved for summary judgment on all of plaintiffs' claims (#296). The matter has been fully briefed and is now ready for disposition.

I. Factual Background²

Defendants Dorsey and McKelvey previously worked together at McKelvey's company, Mira, Inc., in the 1990s. By 2008, Dorsey had gained notoriety as being among the founders of the social media platform Twitter, Inc. Dorsey and McKelvey began working together again in late 2008 and early 2009 on a new business enterprise that would allow individuals to take credit card payments using a smartphone. At the time, Dorsey lived in San Francisco, and McKelvey lived in St. Louis, Missouri. McKelvey traveled between St. Louis and San Francisco multiple times to discuss the business idea with Dorsey.

¹ This matter consists of two consolidated actions. Case No. 4:10-cv-2243 has been stayed in its entirety pending resolution of patent issues by the Patent and Trademark Office. Morley and his company are the defendants in that case. Morley and his company are the plaintiffs in Case No. 4:14-cv-172; the complaint in that matter includes three patent-related counts that are currently stayed, but a number of state-law counts are active and are the subject of discovery disputes addressed in this Memorandum & Order. "Plaintiffs" in this memorandum therefore refers to Morley and his company.

² The following facts are undisputed unless otherwise indicated.

A. Early business development

Morley was and is an Associate Professor of Electrical Engineering at Washington University in St. Louis, Missouri, who studies, among other things, magnetic stripe technology. McKelvey had been friends with plaintiff Morley for years, so in 2009 he contacted Morley about the business idea. Morley testified that McKelvey told him, "I am looking for something new to do. My friend Jack Dorsey just got elbowed out of Twitter. We're looking for something new to do. Do you want to play?" McKelvey and Morley met on February 5, 2009, at Morley's home, where McKelvey told Morley about the plan to accept credit card payments using a smart phone's camera, which would use Optical Character Recognition ("OCR") to read the credit card numbers and charge the card. Morley testified that he told McKelvey, "no you're not. You're going to read the mag[netic] stripe. That's what it's there for." Then McKelvey responded "we don't know how," and Morley told him he could show them how --- that he could "make a little reader that will plug into the [smartphone's] headset jack and read the mag stripe." Morley built a prototype for the headset jack card reader on February 19, 2009.

Meanwhile, Dorsey had engaged Tristan O'Tierney, a software engineer, in January 2009 to help with the business, and Dorsey and McKelvey had dinner with Greg Kidd, who had startup and banking experience, on February 10, 2009, to discuss the payments industry and business ideas. McKelvey, Dorsey, and O'Tierney began working on the business in Dorsey's apartment on February 11, 2009. O'Tierney also emailed a first build of the smartphone application to Dorsey and McKelvey on February 11. On

February 13, McKelvey and Dorsey formed JDJM LLC in Missouri, named after their initials and for the purpose of “payment processing.”³

In addition to Dorsey, McKelvey, Kidd, Morley, and O’Tierney, a number of consultants, contractors, and advisors helped developed what would become Square.

- Sam Wen was an engineer identified by Morley who was hired by McKelvey in February 2009 to develop hardware and software.
- Robert Anderson was a graphic designer hired in mid-February 2009 to design the smartphone application for payment processing, including icons and logos.
- Randy Reddig and Cameron Walters were software engineers who joined in May 2009 to write code for back-end processing of credit cards on computer servers and designed the business’s website.
- Ryan Gilbert was a lawyer who consulted on legal issues and banking relationships beginning in May 2009.

Dorsey and McKelvey paid contracting fees to O’Tierney, Anderson, Redding, Walters, and Wen and reimbursed consultants and contractors for expenses. Dorsey and McKelvey also established banking and credit card processing relationships on behalf of

³ Plaintiffs note that only McKelvey is named as an “organizer” of JDJM LLC.

the business, made decisions regarding the direction and implementation of the business, and invested \$300,000 of their own money in the first year of the business.⁴

In June 2009, Dorsey and McKelvey initiated discussions regarding equity grants for consultants, advisors, and employees. The business was incorporated in Delaware as Seashell, Inc. on June 17, 2009, and the business's name was changed to Square, Inc. on August 7, 2009.⁵

As early as February 2, 2009, McKelvey told Morley in an email that he'd be "in the brain-trust with [McKelvey's] new work." It is undisputed that no one used the term "partner," "co-owner," or "joint venture" in McKelvey's talks with Morley. However, McKelvey spent time with Morley on February 16 in Morley's lab learning about magnetic stripe readers, and Morley built a prototype card reader device that plugged into the audio jack of an iPhone on February 19. That same day, Morley forwarded an email capture of this card read to himself and his son and then to McKelvey and Wen. Morley continued to work on the card reader prototype for the business from St. Louis, approximately 100-160 hours from February through October 2009. McKelvey took over hardware development

⁴ Plaintiffs contend that the \$300,000 was not "invested" inasmuch as Dorsey and McKelvey were reimbursed shortly after loaning the money to the business.

⁵ The business started out as "Squirrel," with the card reader device called the "Acorn." The business's email addresses used the domain "paybysquirrel.com" at first, but the business name evolved with time.

when manufacturing began. Morley also worked with Wen on decoding algorithms⁶, introduced McKelvey and Dorsey to a potential investor and business contacts, and recommended a parts supplier and hardware manufacturer in China.

On March 24, 2009, McKelvey forwarded his and Dorsey's proposed business plan to Morley noting that Dorsey intended to have "some sort of stock deal for the 'advisors.'"

That business plan included the following:

- Under the heading "Executive Summary," it stated that the "Squirrel management team is headed by Jack Dorsey and Jim McKelvey, proven entrepreneurs and innovators who began working together in 1993. Jack and Jim have assembled a team of world-class experts."
- Under the heading "Management and Organization" and the subheading "Ownership," it stated that "Squirrel is currently a trademark brand of JDJM, LLC, a Missouri Limited Liability Company owned by Jack Dorsey and Jim McKelvey. Squirrel has begun the incorporation process in the State of Delaware. When formed, JDJM, LLC will transfer all assets to the new corporation."
- Under the subheading "Daily Management," it listed "Jack Dorsey - President and CEO[:] Jack Dorsey will oversee the daily operational issues of Squirrel and will have ultimate decision-making authority" and "Jim

⁶ Algorithms in this context are the steps taken by a computer to solve a particular problem.

McKelvey - Chairman of the Board[:] Jim McKelvey will ultimately chair Squirrel's board of directors and make sure Jack doesn't go crazy. Jim's role within the company will continue to change as problems and opportunities emerge, but is not anticipated to have a long-term managerial role. Initially, Jim will focus on development of Squirrel's customer service organization. Jim is also responsible for establishing all institutional relationships. Finally, Jim will supervise Acorn development." ("Acorn" was an early name for the Square card reader.)

- Under the subheading "Professional and Advisory Support," Morley's professional biography is presented under the subheading "Electrical Engineering – Dr. Robert Morley." Elsewhere, Morley is listed as "an advisor to Squirrel" and his role is to "oversee[] Squirrel's Acorn development program."
- The plan also identified Greg Kidd as an advisor in banking.

Morley replied to McKelvey's business plan email on March 25. He did not object to the content or to his identification as an advisor, suggesting only that McKelvey add information to Morley's biography and noting that the document needed some grammatical correction. Defendants note that Morley did not address that Dorsey and McKelvey were listed as the sole owners of the business; however, Morley responds that the document did not actually say that Dorsey and McKelvey were the sole owners.

Dorsey and McKelvey testified that they always viewed Morley as an advisor, not as a partner or co-owner. Contractor O'Tierney stated that he had the same view and that Morley's "contributions were temporary in that once we got the audio decoding functional, we wouldn't have needed his help anymore."

Although Morley stated he had "under a thousand" dollars in unreimbursed expenses, defendants state that he otherwise bore no financial risk of loss as did Dorsey and McKelvey. Morley was advised of Dorsey and McKelvey's plans to incorporate in June and expressed no objection or concerns.

On July 8, 2009, Morley wrote to his friend Bruce Baebler (who is also a stakeholder in Morley's company, defendant REM Holdings) that the "company has been incorporated and I need to negotiate what my contribution is worth in equity."

B. The patent application and equity negotiations

On May 14, 2009, Morley emailed attorney David Chervitz a document entitled "PayBySquirrel Patent Disclosure.docx", copying McKelvey. The document said, "[a]s we discussed on the phone a couple of weeks ago, we'd like to seek patent protection for intellectual property we have developed since early February of this year," listing two credit card system/methods for collecting payments. A patent application was filed June 10, U.S. Patent Application Ser. No. 12/456,134 ("the '134 Application"), titled "Card Reader Device for a Cell Phone and Method of Use" and naming Morley as the sole inventor. McKelvey personally paid attorney Chervitz his fees and for the costs of the patent application.

On June 23, 2009, Dorsey emailed Morley about Morley's "ongoing role with the company," stating that "we'd love to have you participate as much as possible" and

suggesting an advisor role “with equity and some lightweight structure around what the company can expect from your participation....Also, in accordance with transferring the rights of the patent over to the company, we’d like to award equity.” Morley responded the same day “I am really enjoying my foray back into the exciting world of entrepreneurship and would like to at least keep a part-time home here ;-).”

On July 21, Dorsey and Morley met in person in San Francisco, and Dorsey offered Morley a 1% equity stake in exchange for assignment of the patent application and a 0.25% equity stake for “serving on the technical advisory board.” Morley said he would think about it. On July 29, Morley emailed his friend Baebler that he was considering licensing his intellectual property rights to another company, MagTek, and was leaning against offering any exclusive license, including to Dorsey.

Morley accepted the 1.25% equity offer with some modifications in August. But when Square’s lawyers sent the paperwork on September 14, 2009, Morley objected to the four-year vesting period present in the terms. He rescinded his acceptance of the offer on October 1, 2009. On October 2, Dorsey emailed Morley a new offer, “1% of the company, fully vested shares. Or \$100,000.” Morley accepted the fully vested 1%. Around the same time, Morley and Baebler formed an LLC --- plaintiff REM Holdings 3, LLC --- on October 5. Morley appointed Baebler as his agent in the equity/patent assignment negotiations on October 6. Despite Morley’s earlier acceptance of a fully vested 1%, Morley and Baebler ultimately demanded 1.32% of the company’s pre-funding shares (they were worried that an upcoming funding round would dilute his share of the company). Dorsey and McKelvey offered 1.25%, fully vested, but ultimately the 0.7% gap was not bridged, and negotiations broke down.

C. Post-negotiation activities

Baebler sent letters to Square's attorneys in late October asking that they cease and desist using Morley's intellectual property. Morley assigned his patent applications to REM.⁷

Square went on to acquire "intellectual property...related to magnetic stripes" from others in December 2009 and January 2010. Notably, McKelvey reached out to Luis Padilla Visdómine, who in 2004 had published a description of a audio-in device that could read credit cards. The record demonstrates that Morley himself had come across Padilla's blog post on the internet in August 2009, and attorney Chervitz advised in light of that blog post (titled "Turning your mobile phone into a magnetic stripe reader") that the concept of a card reader for a cell phone is "probably not patentable." Padilla licensed the idea to Square for \$1,000 in January 2010.

Meanwhile, Morley tried to license the technology to Square's competitors. He and Baebler worked on a document for dissemination to the media titled "Squaring Things Up." The documents stated that McKelvey and Dorsey were contemplating a mobile payments startup and that Morley "went off on his own and using some components he had on hand, assembled a working feasibility prototype, and about a week after the meeting produced a recognizable waveform of a credit card magnetic stripe on his iPhone and showed it to" Dorsey and McKelvey. The document went on to say that "Jack, Jim, and the Square crew are proceeding on the challenging task of making a startup successful" and

⁷ In October 2010, for reasons not explained to the Court, Dorsey gifted to Morley equity in the form of a stock transfer (30,517 shares) to Morley's company REM. The Court is at a loss to understand the genesis and ramifications of this transfer.

that “Square appears to continue to use the fruits of Bob’s thoughts and labor.” Morley told others that he had “applied for patent and am seeking to license the technology.” Media reports stated that “Morley planned to assign the patent to Square in exchange for ownership shares in the company, but [] the two sides couldn’t come to an agreement.”

D. Patent issues and lawsuits

On October 12, 2010, the Patent and Trademark Office (“PTO”) issued U.S. Patent No. 7,810,729 (“the ‘729 Patent”), listing Morley as sole inventor and assigning the patent to REM. On December 1, 2010, McKelvey and Square filed a complaint against REM, seeking to correct inventorship of the ‘729 Patent. REM filed an answer and counterclaim seeking declaratory judgment for patent inventorship and patent infringement. Attorney Chervitz represented REM initially in those proceedings, but Square and McKelvey successfully moved for Chervitz’s disqualification in light of Chervitz’s representation of Morley and Square during the patent application process (for which McKelvey paid). In June 2011, the PTO granted Square’s request for reexamination of the patents at issue in the lawsuit. This Court stayed that matter pending the reexamination, and it remains stayed today. The PTO and later the Patent Trial and Appeals Board (“PTAB”) rejected all claims of the ‘729 patent on March 28, 2014, but following failed motions for reconsideration, Morley filed a notice of appeal with the Federal Circuit on September 9, 2015.

Baebler and Morley sought to secure funding for the litigation beginning in 2011. Numerous communications regarding fundraising have been produced. Defendants contend that those communications support that Morley was not a co-founder, co-owner,

joint venturer, or partner of Square or the business that became Square. One February 2011 “prose summary” of the background behind the 2010 lawsuit stated that “Morley assumed at some point a deal would be struck to trade his IP for equity in Square.”

Although plaintiffs agree that the cited communications do not use the specific language used by defendants such as co-founder, co-owners, joint venturer, or partner, Morley maintains that he considered himself in a joint venture with McKelvey and Dorsey.

On January 30, 2014, Morley and REM filed their own lawsuit, No. 4:14cv172. It named Square, Dorsey, and McKelvey as defendants and alleged that Morley had agreed with Dorsey and McKelvey to form a joint venture in February 2009, but that Morley had been wrongfully cut out. The twelve counts included the following:

- Count I – breach of joint venture agreement
- Count II – breach of fiduciary duty
- Count III – unjust enrichment
- Count IV – patent infringement
- Count V – constructive trust
- Count VI – civil conspiracy
- Count VII – negligent misrepresentation
- Count VIII – fraud
- Count IX – fraudulent nondisclosure
- Count X – correction of inventorship
- Count XI – conversion

- Count XII – misappropriation of trade secrets

The patent-related claims --- Counts IV, X, and XI --- were stayed by this Court pending reexamination, and the 2014 lawsuit was consolidated with the 2010 lawsuit, which is still stayed pending resolution of the pending patent-related matters.

E. Trade secret allegations

After a long series of discovery responses and cross-motions to compel, plaintiffs articulated the following trade secrets:

1. Dr. Morley's headphone-jack card reader invention, which is defined in the following patent claims:
 - a. All claims of the '729 patent;
 - b. All claims of the '394 patent;
 - c. Claims 1–6 and 14–20 of the '248 patent;
 - d. All claims of the '946 patent;
 - e. All claims of U.S. Patent Application 14/083, 315;
 - f. All claims of U.S. Patent Application 14/444,608;
2. Dr. Morley's algorithm for decoding an audio signal from a headset-jack card reader on a smart phone, comprising the steps:
 - a. Peak detection;
 - b. Determining 1s and 0s from the distance between peaks;
 - c. Start sentinel detection;
 - d. Error checking: parity and longitudinal redundancy check;
 - e. Framing of 5 bit characters in track 2;
 - f. Odd parity bit check;
 - g. End sentinel detection;
 - h. Determination of stable 0s duration in leading 0s;
 - i. Low pass filtering to reduce noise;
 - j. Inverse filtering to undo phase distortion of high pass filter.
3. The trade secret idea of partitioning the functions of a traditional magnetic stripe card reader such that the decoding and subsequent (e.g., communications) functions are performed on a cell phone, and the electrical components of the card reader device need only comprise a readhead, one or more resistors, and a headphone-jack plug.

(#236-2 at 18-19; #260).

Defendants maintain that they have not used any of Morley's alleged trade secrets in their business.

E. The instant motion

Defendants have moved for summary judgment on all of plaintiffs' claims (#296). The matter has been extensively briefed. Nearly 400 exhibits have been filed. The Court has thoroughly considered the record and the parties' briefs, and the matter is now ripe for disposition.

II. Legal Standard

Pursuant to Federal Rule of Civil Procedure 56(c), a district court may grant a motion for summary judgment if all of the information before the court demonstrates that "there is no genuine issue as to material fact and the moving party is entitled to judgment as a matter of law." *Poller v. Columbia Broadcasting System, Inc.*, 368 U.S. 464, 467 (1962). The burden is on the moving party. *City of Mt. Pleasant, Iowa v. Assoc. Elec. Co-op., Inc.*, 838 F.2d 268, 273 (8th Cir. 1988). After the moving party discharges this burden, the nonmoving party must do more than show that there is some doubt as to the facts. *Matsushita Elec. Industrial Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586 (1986). Instead, the nonmoving party bears the burden of setting forth specific facts showing that there is sufficient evidence in its favor to allow a jury to return a verdict for it. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249 (1986); *Celotex Corp. v. Catrett*, 477 U.S. 317, 324 (1986).

In ruling on a motion for summary judgment, the court must review the facts in a light most favorable to the party opposing the motion and give that party the benefit of any inferences that logically can be drawn from those facts. *Buller v. Buechler*, 706 F.2d 844, 846 (8th Cir. 1983). The court is required to resolve all conflicts of evidence in favor of the nonmoving party. *Robert Johnson Grain Co. v. Chem. Interchange Co.*, 541 F.2d 207, 210 (8th Cir. 1976).

III. Discussion

A. Joint Venture Claim

Plaintiffs' Count I is for Breach of Joint Venture Agreement. Plaintiffs allege that Dorsey, McKelvey, and Morley "agreed to create and develop a mobile credit card transaction business," which "used Dr. Morley's inventions, specifically the Square card reader and the corresponding magnetic stripe decoding algorithms of the Square app." (#1 in Case No. 4:14cv172 ("Morley Complaint") at ¶¶ 73-74.) Plaintiffs allege that defendants Dorsey and McKelvey breached the agreement by refusing to recognize Morley's one-third ownership and control interests, incorporating a new company, funneling all assets out of the joint venture and into that new company, and excluding Morley from ownership in and control of that company. (Id. at ¶ 82.)

A joint venture is subject to the same legal principles as a partnership. See, e.g., 48A C.J.S. Joint Ventures § 3 ("Indeed, the legal principles for determining the existence of a joint venture have been said to be identical to those for determining a partnership, and the two may be created in the same ways."). In Missouri, partnership is statutorily defined

as “an association of two or more persons to carry on as co-owners of a business for profit.” § 358.060.1 RSMo. “The partnership agreement may be written, expressed orally, or implied from the acts and conduct of the parties.” In re Reuter, 686 F.3d 511, 517 (8th Cir. 2012) (quoting Hillme v. Chastain, 75 S.W.3d 315, 317 (Mo. App. S.D. 2002)). Notably, “when the essentials of such an agreement have been established, expressly or by implication, it is not to be avoided because of uncertainty or indefiniteness as to minor details and, in the absence of express agreement, it will be presumed that profits are to be shared equally.” Grissum v. Reesman, 505 S.W.2d 81, 86 (Mo. 1974).

Defendants contend that Morley’s joint venture claim is untenable and that they should be granted summary judgment on it because plaintiffs cannot possibly overcome the steep standard of proof required to establish such a claim. In that regard, the parties hotly contest the burden of proof to establish a joint venture, with plaintiffs arguing for a preponderance of the evidence standard and defendants a clear and convincing evidence standard. To be sure, Missouri law on the issue is confusing. Most recent cases --- all from the Missouri Court of Appeals --- apply the clear and convincing standard. See, e.g., Clark v. Francis, 422 S.W.3d 369, 378 (Mo. App. W.D. 2013); Winslow v. Nolan, 319 S.W.3d 497, 501 (Mo. App. E.D. 2010); Price v. Vattes, 161 S.W.3d 397, 400 (Mo. App. S.D. 2005); *H2O’C v. Brazos*, 114 S.W.3d 397, 402 (Mo. App. W.D. 2003); Nesler v. Reed, 703 S.W.2d 520, 523 (Mo. App. E.D. 1985). See also the Eighth Circuit’s use of the clear and convincing standard in In re Reuter, 686 F.3d at 517 (citing Hillme, 75 S.W.3d at 317 without analysis). A few cases also confoundingly state that the agreement must be

“proved by cogent, clear and convincing evidence, or at least by a preponderance of the credible evidence.” See, e.g., *Morrison v. Labor & Indus. Relations Comm’n*, 23 S.W.3d 902, 909 (Mo. App. W.D. 2000); *Shea v. Helling*, 826 S.W.2d 419, 421 (Mo. App. E.D. 1992); *Brotherton v. Kissinger*, 550 S.W.2d 904, 907 (Mo. App. S.D. 1977). The last pronouncement by the Supreme Court of Missouri, however, in *Grissum*, 505 S.W.2d 81, noted that the burden is a preponderance of the evidence unless the joint venture at issue involves “an oral contract to convey real estate or the establishment of a resulting trust in real property,” in which case the higher clear and convincing burden applies. *Id.* at 85-86. The case relied on for this distinction, *Brooks v. Brooks*, 208 S.W.2d 279 (Mo. 1948), in turn relied on 48 C.J.S., *Joint Ventures*, § 12, for the general rule that “[a] preponderance of the evidence is necessary and sufficient to prove a joint adventure.” *Id.* at 284. The clear and convincing standard, then, is simply the exception to the general rule for those two particular categories of cases.⁸ Holdings to the contrary in the post-*Grissum* cases simply overlook the distinction. Accordingly, the standard here is preponderance of the evidence.

The intent of the parties is the primary factor for determining whether a partnership exists. *Hillme*, 75 S.W.3d at 317 (citing *Binkley v. Palmer*, 10 S.W.3d 166, 169 (Mo.

⁸ The current edition of *Corpus Juris Secundum* is consistent. 48A C.J.S. *Joint Ventures* § 10. Also, in a recent survey by the en banc California Supreme Court, it does indeed appear that the preponderance of the evidence standard is used in a clear majority of jurisdictions. *Weiner v. Fleischman*, 816 P.2d 892, 896-97 (Cal. 1991) (en banc).

App. E.D. 1999)). “The required intent necessary to find a partnership existed ‘is not the intent to form a partnership, but the intent to enter a relationship which in law constitutes a partnership.’” Id. (quoting Meyer v. Lofgren, 949 S.W.2d 80, 82 (Mo. App. W.D. 1997)). The intent to form a partnership may be “implied from conduct and circumstances of the party” and “the parties are not required to know all the legal implications of a partnership.” Id. at 317-18 (citing Grissum, 505 S.W.2d at 86). The Court considers “all the conduct and words of the parties” to determine whether they are sufficient to imply an agreement. Downey v. McKee, 218 S.W.3d 492, 499 (Mo. App. W.D. 2007).

Plaintiffs insist there is ample evidence of the parties’ shared intent to carry on the Square business as co-owners. They argue that a jury could reasonably infer that Morley, Dorsey, and McKelvey mutually agreed to start a business as co-owners, as evidenced by (1) the circumstances of Morley’s invitation to be part of the enterprise, (2) the transformative nature of Morley’s card reader contribution, (3) the lack of a consulting agreement in light of the fact that other “consultants” had such agreements, (4) Morley’s other efforts in support of the enterprise, (5) verbal and written representations by the parties and others, and (6) Dorsey’s and McKelvey’s final negotiations with Morley.

Defendants, on the other hand, argue that Morley did not share in the company’s profits or risk of losses, had no voice in management or role in the direction of the company, had no role in employment decisions, had no ability to enter into contracts for the company, was not held out as a partner externally, accepted a mere 1% equity stake in the

company, and took other steps after negotiations broke down suggesting that even he never saw himself as a partner.

Defendants downplay Morley's role in the business by grouping him with a team of other "consultants" they say were involved in Square's early stages. Morley was contacted by McKelvey around February 5, 2009, but another "team" member, Greg Kidd was included in a dinner with Dorsey and McKelvey on February 10, 2009 to discuss the business plan. The next day, an iOS engineer named Tristan O'Tierney had emailed Dorsey and McKelvey the first build of the business's software. Dorsey and McKelvey formed an LLC named JDJM on February 13, 2009. McKelvey and Morley met in Morley's lab on February 16, 2009, and Morley built the prototype card reader device using components in his lab on February 19, 2009. Sam Wen and Robert Anderson were both brought on in February, and other contractors/consultants Randy Reddig, Cameron Walters, and Ryan Gilter started in May 2009. None of those consultants/contractors viewed himself as a founder --- rather, they were paid contracting fees, and they were offered the chance to purchase equity later in 2009. However, plaintiffs note that the contracting fees paid to those individuals stand in stark contrast to Morley --- the parties agreed that he did not receive any contracting fees or reimbursements.

Defendants also focus on the fact that Morley bore no risk of loss that Missouri courts expect to see in a partnership. *Van Hoose v. Smith*, 198 S.W.2d 23, 27 (Mo. 1940). Morley says he risked losing the 100-160 hours he spent implementing and perfecting the technology. Indeed, "[w]hen one party contributes the capital and the other the labor, skill

or experience for carrying on a joint enterprise, such a combination constitutes a partnership unless something appears to indicate the absence of a joint ownership of the business and profits.” *Van Hoose*, 198 S.W.2d at 27 (quoting *State ex rel. Jones et al. v. Daues*, 13 S.W.2d 537, 539-40 (Mo. 1928)). Defendants argue that Morley cannot seriously contend he bore the risk of losing that “sweat equity” inasmuch as he maintained all along that he still held the intellectual property rights to the card reader and in fact expected to trade it for equity in the company (or, later, to license it to someone else). However, Morley maintains that the agreement was for him to transfer his intellectual property to the partnership and that he later shopped his IP merely to mitigate his damages. Furthermore, the Court notes that “there need not necessarily be an agreement to share losses” in order to find an implied partnership. *Beatty v. Garner*, 458 S.W.2d 288, 291 (Mo. 1970); see also *Bussinger v. Ginnever*, 213 S.W.2d 230, 236 (Mo. App. 1948) (noting that absence of agreement concerning losses is not dispositive); but see *H2O’C*, 114 S.W.3d at 403 (suggesting parties to a partnership must have agreed to share losses).

This case presents what appears to be a novelty in Missouri jurisprudence. As noted in *Van Hoose*, 198 S.W.2d at 26, “perhaps no definition of the term partnership could be framed that would be all comprehensive.” Most caselaw relied upon by defendants involves employees of businesses who received salaries but were promised a cut of the profits should the business be profitable. E.g., *Clark*, 422 S.W.3d at 375; *Winslow v. Nolan*, 319 S.W.3d 497, 500 (Mo. App. E.D. 2010); *H2O’C*, 114 S.W.3d at 403.

The Missouri courts there held that salaried employees who had contingent agreements to share profits were not partners. *Id.*⁹ That is not the case here.

Morley acknowledges that he was not a member of JDJM, but he says that what he, Dorsey, and McKelvey accomplished between February and October 2009 was a separate joint venture that never took flight --- instead, Dorsey and McKelvey formed Square, took his ideas and inventions, and refused to grant him fair equity in that company. It is clear to this Court that McKelvey and Dorsey intended to work with Morley to build a business in the mobile payments industry. Whether or not that intention rose to the level of a joint venture or partnership appears to this Court to be a question for the jury.

Morley describes his early involvement as “transformative” because he changed the direction of McKelvey and Dorsey’s thinking --- they were going to use the phone’s camera to capture credit card numbers, but Morley conceived of a way for the phone to read the card’s magnetic stripe. It appears undisputed that McKelvey and Dorsey ran with that idea. McKelvey wrote that “just the Acorn itself” was a big deal, and Dorsey also recognized that it was “huge,” observing that the ability to swipe a magnetic stripe card was “crucial to the demos” with potential partners and investors. During equity negotiations, McKelvey wrote to Morley that McKelvey “appreciate[ed] the awesome

⁹ In *H2O’C*, the court found it to be significant, too, that the parties shared gross revenues, not profits. 114 S.W.3d at 404. That court held that the plaintiff was not in fact a partner because, among other reasons, he was paid wages, filed an unemployment claim with the state upon termination of his relationship with H2O’C, had no voice in management, and, though he purchased a microscope for use in the business, H2O’C’s owner offered to pay rent for its use. *Id.* at 404-06.

idea.” Plaintiffs say this supports that Dorsey and McKelvey would have considered Morley a co-owner. But defendants respond that this does not matter because Morley saw the card reader as his invention, something to sell to Square, not something he created as a part of Square. Plaintiffs disagree and point to Morley’s testimony that he created the card reader for the joint venture. Plaintiffs ask how defendants could pursue an entire business on that idea, in collaboration with Morley, and not believe such a pursuit and collaboration was significant, probative evidence of whether or not the parties intended to carry on as co-owners. This Court agrees. See, e.g., *Beatty*, 458 S.W.2d at 290-91 (holding plaintiff’s proof of joint venture was sufficient where plaintiff’s involvement in the business had been significant).¹⁰

Morley had not suggested a mere logo or a company name --- his idea and prototype shaped the company itself. Although not dispositive, the facts that Morley was invited to participate early and that his invention changed the company’s course are probative. Further weakening defendants’ suggestion that Morley viewed the IP as his and his alone is that defendant McKelvey paid for patent attorney Chervitz’s time and the fee for the patent application. Morley was identified as the sole inventor, but, again, that is not dispositive. See *Hillme*, 75 S.W.3d at 318 (noting that “[p]artnership property that is held only in an individual name does not affect the partnership status.”).

¹⁰ In *Beatty*, the court noted that “Defendants would have plaintiff Clare Beatty lend his efforts and knowledge of automobile service station sites and operations, take them to view many sites which plaintiffs found were for sale, advise them in construction of service stations, aid them in securing loans by pledging stocks, and aid in the clearing of titles, securing lessees for the properties, and, in the end, have no interest in the properties purchased.” 458 S.W.2d at 291.

Furthermore, Morley offers evidence of his “control” during the early months of the company’s development. He identified and supervised Wen, oversaw hardware development before manufacturing of the Square device began, independently contacted third parties on behalf of the company, and managed the patent attorney relationship. Control over all aspects of the business is not a requirement for a partnership or joint venture; exercising some degree of control over various aspects of the business is “indicative of the requisite control necessary to find a joint venture.” *Firestone v. VanHolt*, 186 S.W.3d 319, 326 (Mo. App. W.D. 2005); see also *Queen v. Schultz*, 747 F.3d 879, 888 (D.C. Cir. 2014) (reversing summary judgment where plaintiff had developed concept, marketed it, and arranged for production even though plaintiff ceded all control over “content, hiring, and production,” because “a reasonable jury could accept [plaintiff’s] argument that he nonetheless retained control over other aspects of the partnership business.”). Morley’s involvement with the development of the card reader itself --- the foundation of the business --- up through the manufacturing stage is enough to refute defendants’ contention that Morley did not have enough “control” to support an implied partnership.

In addition, as stated above, Morley was different from other individuals who were involved early because, unlike O’Tierney, Wen, and others, Morley received no contracting fee. Morley suggested McKelvey hire Sam Wen to help with software development, which Morley directed, and he would have also known that McKelvey was

paying Sam Wen for his time. Finally, Morley contends he was promised a “stock deal” or otherwise promised equity in the company through McKelvey’s emails to him.

Defendants suggest that Morley’s ultimate willingness to accept a less-than-2% equity stake in Square is evidence that even he never considered himself an equal partner in the business. Plaintiffs do not explain this apparent conflict, and it surely supports defendants’ position. In addition, the Court does not discount defendants’ suggestion that if Morley truly believed himself to be an equal partner, he would have spoken up during the drafting of the business prospectus and upon being informed of the company’s incorporation. But Morley’s willingness to accept less than 2% equity does not defeat his claim of joint venture; rather it is merely evidence of a lesser interest in the joint venture. § 358.180(1) RSMo (setting forth the rights and duties of partners “subject to any agreement between them”); see also *Grissum*, 505 S.W.2d at 86. Defendants make a substantial showing in setting forth their evidence that the parties did not intend to carry on as co-owners of a business. However, the Court must review the facts in a light most favorable to the plaintiffs and give that party the benefit of any inferences that logically can be drawn from those facts. *Buller*, 706 F.2d at 846. The Court must look to at all the conduct and words of the parties in the totality of the circumstances. *Downey*, 218 S.W.3d at 499. Plaintiffs have effectively rebutted defendants’ evidence with specific facts, and a reasonable jury might return a verdict for plaintiffs. See *Anderson*, 477 U.S. at 249; *Celotex*, 477 U.S. at 324. Although defendants suggest that such a determination will open the floodgates to partnership claims by every entry level startup employee,

defendants once again downplay the importance of Morley's contribution and role within the business. Considering the totality of the circumstances --- the parties' preexisting relationships, McKelvey's invitation to "play" and earlier communications about entrepreneurial activity with Morley,¹¹ the transformative nature of Morley's idea and his work in bringing that idea to life, Morley's continued role within the business and his work to patent the card reader (paid for by McKelvey), the promise of a "stock deal," just to name a few --- there is at least a question of fact as to whether the parties intended to carry on this business as co-owners. See § 358.060.1 RSMo. The Court must therefore deny summary judgment to defendants.

B. Fraud-Based Claims

Plaintiffs bring three "fraud-based" claims: negligent misrepresentation (Count VII), fraud (Count VIII), and fraudulent non-disclosure (Count IX). Plaintiffs contend that when the evidence is presented to the jury, the same facts that support Morley's joint venture claim could alternatively lead the jury to a slightly different conclusion: that is, although defendants may not have intended to start a business as co-owners with Morley, they did intend to defraud him in order to obtain, without compensation, his contributions.

1. Legal standard

Missouri Supreme Court rejected "clear, cogent, and convincing" standard of proof for fraud in favor of a preponderance of the evidence standard. See *Crawford v. Smith*, 470

¹¹ For example, McKelvey had in December 2008 approached Morley about working on an open-source automobile.

S.W.2d 529, 532 (Mo. banc 1971). That same preponderance of the evidence standard applies to plaintiffs' negligent misrepresentation and fraud claims. See *id.*; *Troknya v. Cleveland Chiropractic Clinic*, 280 F.3d 1200, 1208 (8th Cir. 2002) (applying Missouri law).

2. Representations and reliance

Each of the three fraud-based counts (Counts VII, VIII, and IX) include elements requiring a representation on behalf of defendants and Morley's reliance upon them. The other elements of the fraud-based claims are not addressed by the parties and are presumed sufficient for the purpose of summary judgment.

Plaintiffs allege that McKelvey made false representations to Morley that he "would be a member of a joint venture to develop a business to process credit card transactions using a mobile device." (Cmplt. ¶ 141.) Defendants contend that the record is devoid of any evidence of any such representation. They suggest that plaintiffs rely only on the question "do you want to play?" and the emailed statement "you're definitely in the brain-trust with my new work" as representations, and that those statements are too vague to satisfy the requirements of plaintiffs' fraud-based claims. See, e.g., *Chase Resorts, Inc. v. Johns-Manville Corp.*, 476 F. Supp. 633, 639 (E.D. Mo. 1979), *aff'd*, 620 F.2d 203 (8th Cir. 1980) (holding that a promise of "'years of trouble free performance' is so vague and abstract that this Court would necessarily have to guess as to the precise nature of the material fact allegedly misrepresented").

Plaintiffs insist that those statements are just part of the broader context on which their claims are based. “An assertion may also be inferred from conduct other than words.” Restatement (Second) of Contracts § 159 (1981), cmt. a. Indeed, a “false representation may be made by spoken words or meaningful affirmative conduct.” *Blaine v. J.E. Jones Const. Co.*, 841 S.W.2d 703, 705 (Mo. App. E.D. 1992) (citing *Wion v. Carl I. Brown & Co.*, 808 S.W.2d 950, 954-55 (Mo. App. W.D. 1991)).

A false impression made by words or deeds in order to mislead another and gain an undue advantage over the other suffices. *Bank of N. Am. v. Crandall*, 87 Mo. 208, 212 (1885); *Jones v. West Side Buick Auto Co.*, 93 S.W.2d at 1086. In such a case, a misrepresentation implied from the circumstances may be equivalent to a misrepresentation positively expressed. Although to be actionable the misrepresentation need not be in words, nevertheless it must constitute an affirmation of fact and not merely of opinion.

Wion, 808 S.W.2d at 954-55. Plaintiffs thus contend that the totality of the circumstances described above, if it does not constitute an implied joint venture, constitutes a false representation that Dorsey and McKelvey intended to go into business with Morley with Morley’s credit card reader invention. Viewed through plaintiffs’ lens, the question “do you want to play” and statement regarding being part of McKelvey’s “brain trust” are just part of the story. Added to that story are Morley’s “game-changing” idea, his creation of the prototype, his work with McKelvey on the invention, his work on the software with others on the team, the promise of stock, the fact that Morley was not compensated while other early-involved individuals were paid as contractors, and all of the other evidence relied upon by plaintiffs in their joint venture claim.

Even absent any affirmative misrepresentations, plaintiffs claim that defendants had a duty to clarify Morley's status within the company in light of Morley's foundational ideas and hours of effort. Indeed, "[c]oncealment of a material fact of a transaction which a party has a duty to disclose constitutes fraud as much as though affirmative representation is given." *Refrigeration Indus., Inc. v. Nemmers*, 880 S.W.2d 912, 918 (Mo. App. W.D. 1994) (quoting *Curtis v. Kays*, 670 S.W.2d 887, 893 (Mo. App. W.D. 1984)). "A duty to disclose arises when the silent party possesses superior knowledge that is not within the fair and reasonable reach of the other party." *Id.* (internal quotation omitted). But defendants contend that they had no duty to disclose anything to Morley because they owed no fiduciary duty to him. Plaintiffs suggest that circumstances in which the parties were long-time friends constitute the sort of "relationship of trust and confidence" giving rise to a duty to disclose. (#317 at 47 (citing Restatement (Second) of Torts § 551(2)(a) (1977))). Missouri courts, however, have rejected that argument. See *Constance v. B.B.C. Dev. Co.*, 25 S.W.3d 571, 581 (Mo. App. W.D. 2000). To establish a "confidential" or "fiduciary" relationship giving rise to a duty to disclose, there must be a subservient and a dominant party. *Kratky v. Musil*, 969 S.W.2d 371, 377 (Mo. App. W.D. 1998). No such situation appears to exist here. Still, where one party knows of facts "that he knows to be necessary to prevent his partial or ambiguous statement of the facts from being misleading," a duty to disclose arises. Restatement (Second) of Torts § 551(2)(b). Plaintiffs say that a jury could conclude that the collective statements and

actions required clarification as to Morley's actual role and compensation in the company.

This Court agrees.

Defendants also contend they are entitled to summary judgment on plaintiffs' fraud claims because Morley cannot show that he relied on the alleged representations.

Reliance is of course a necessary element of plaintiffs' claims. See, e.g., *Wion*, 808 S.W.2d at 953 (citing *Sofka v. Thal*, 662 S.W.2d 502, 506 (Mo. banc 1983)). Defendants point out that Morley equivocated when asked whether he wanted to "play," responding that it depended on what McKelvey had come up with, and, up until 2014, Morley never said he was being unfairly treated or excluded. Morley made statements that he was not "in the company" like the others, that he considered the card reader device to be his own intellectual property, and that had his own "cards to play."

However, plaintiffs counter, and the Court agrees, that those post hoc comments do not conclusively demonstrate a lack of reliance. Morley says he relied on McKelvey's statements inviting him to a joint venture when he originally disclosed his card reader idea and agreed to pursue it. He and McKelvey "met so that he could tell me what it was that he and Mr. Dorsey had come up with, to see if I was interested in taking him up on his invitation to join their joint venture." As Morley describes it, telling McKelvey about the card reader was his "RSVP" to the "invitation" to join the joint venture. Furthermore, Morley worked many hours in reliance on McKelvey and Dorsey's representations (which continued as they involved him in the business and sought his expertise). Morley has

adequately demonstrated that a jury could find he relied on defendants' representations, and summary judgment is not warranted.

C. Derivative Claims

Defendants characterize plaintiffs' claims for breach of fiduciary duty (Count II), unjust enrichment (Count III), constructive trust (Count V), and civil conspiracy (Count VI) as "derivative claims" because each of these claims is dependent on plaintiffs' claim for breach of joint venture agreement (Count I). Defendants contend that because defendants are entitled to summary judgment on Count I, that they are entitled to summary judgment on these counts as well. However, defendants' motion for summary judgment is denied as to Count I. Defendants provide no arguments justifying summary judgment other than their plea that plaintiffs cannot show that Morley was in a joint venture or partnership, and, as a result, their summary judgment arguments regarding the "derivative claims" must also be denied.

D. Trade Secret Claims

Plaintiffs claim that the defendants misappropriated their trade secrets in Count XII. To establish a violation of the Missouri Uniform Trade Secrets Act, §§ 417.450 RSMo, et seq. ("MUTSA"), plaintiffs must demonstrate (1) the existence of a protectable trade secret, (2) misappropriation of those trade secrets by defendants, and (3) damages. § 417.453(2) RSMo. See *Secure Energy, Inc. v. Coal Synthetics, LLC*, 708 F. Supp. 2d 923, 926-27 (E.D. Mo. 2010). Defendants argue they are entitled to summary judgment on plaintiffs' trade secret claims because they say plaintiffs cannot show misappropriation

occurred, nor can they show a protectable trade secret. Defendants also say they are entitled to summary judgment regarding plaintiffs' Trade Secret #2 because there is no evidence defendants have ever used it.

1. Misappropriation

To show that any of the alleged trade secrets were misappropriated, plaintiffs must show that the misappropriation occurred through "improper means" or the breach of a duty of confidentiality or secrecy. § 417.453(2). Defendants argue that plaintiffs' claim rests on their alternative fraud-related theories that, to the extent Morley was not part of a joint venture, defendants misled him into thinking he was in order to misappropriate his trade secrets. Defendants therefore incorporate their arguments for summary judgment on plaintiffs' fraud-related claims. Because the Court holds that defendants are not entitled to summary judgment on the fraud-related claims, their arguments about plaintiffs' misappropriation evidence also fail.

2. Protectable Trade Secrets

A "trade secret" is defined as

information...that: (a) Derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by other persons who can obtain economic value from its disclosure or use; and (b) Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

§ 417.453(4) RSMo. Defendants say that plaintiffs' three identified "trade secrets" were not protectable trade secrets.

Courts have used the following factors to determine whether information constitutes a trade secret under MUTSA: (1) the extent to which the information is known outside of the business; (2) the extent to which it is known by employees and others involved in the business; (3) the extent of measures taken by the business to guard the secrecy of the information; (4) the value of the information to the business and to its competitors; (5) the amount of effort or money expended by the business in developing the information; (6) the ease or difficulty with which the information could be properly acquired or duplicated by others. *Secure Energy*, 708 F. Supp. 2d at 926-27 (quoting *Cerner Corp. v. Visicu, Inc.*, 667 F. Supp. 2d 1062, 1076–1077 (W.D. Mo. 2009)). “The existence of a trade secret is a conclusion of law based on the applicable facts.” *Lyn-Flex W., Inc. v. Dieckhaus*, 24 S.W.3d 693, 698 (Mo. App. E.D. 1999).

a. Trade Secrets #1 and #3

Trade Secrets #1 and #3 pertain to the headphone-jack card reader device and the “partitioning” concept, i.e., that the device simply reads the card and the smartphone does the decoding and communication. Defendants maintain that these trade secrets were known outside the business and that they are easily duplicated, that they were not kept secret in any way, that they are of little value to Square, and that Morley’s time and effort spent developing them was minimal. For example, defendants say Trade Secrets #1 and #3 were described on the Internet in 2004 by a Spanish graduate student, Luis Padilla Visdómine (“Padilla”). Other sources on the Internet also published descriptions of devices bearing some relationship to Morley’s invention. But there is at least a question

of fact as to whether Padilla and other publishers' writings are enough to support that Morley's invention was known outside the business. Plaintiffs and their expert, Mark Jones, argue that Padilla and others did not disclose the use of a headphone jack on a cellular phone or the simplified circuitry of Morley's card reader design. Competitors did not have similar solutions available, and even defendants' expert has not identified any other products that interfaced with a mobile phone through the audio jack. Moreover, plaintiffs point out that just because the device is now described on the Internet does not mean that it was generally known --- the websites have not been shown to have been available during the relevant time period, and it is not clear that Padilla's website was known to anyone within the payments industry. See, e.g., *Surgidev Corp. v. Eye Tech., Inc.*, 828 F.2d 452, 456 (8th Cir. 1987) (affirming district court finding that trade secret was not generally known by others in the subject industry). The Court also notes that trade secret law does not require the type of novelty and nonobviousness required in patent law. See *AvidAir Helicopter Supply, Inc. v. Rolls-Royce Corp.*, 663 F.3d 966, 972-73 (8th Cir. 2011). As plaintiffs point out, a reasonable jury could find that defendants' cited websites and articles were hardly known at all, much less generally known. Certainly, the record shows that the trade secrets were not known to McKelvey and Dorsey before Morley told them, and that is a relevant consideration.¹²

¹² It is worth noting that the language used in most trade secret cases reflects a situation where an employee leaves a business and steals the business's secrets. Here, Morley is claiming that the business (through Dorsey and McKelvey) stole his secret.

There also appears to be a disputed issue of fact regarding the issue of secrecy. Defendants say that Morley voiced no concerns about McKelvey disseminating technical specifications during development, and they also note that Morley discussed and revealed his trade secrets to his friends and family. Plaintiffs respond that Dorsey himself expressed surprise at McKelvey's lackadaisical approach to secrecy (and regardless, McKelvey's actions cannot be imputed to Morley), although the presence of confidentiality legends and the fact that manufacturers are not incentivized to divulge potential customer secrets mitigate against this evidence. Another employee testified that the company was in "stealth mode." As for Morley's disclosures, he testified that any disclosures were made with the expectation that the secret would be maintained. Other employees had confidentiality agreements, and most of the discussions Morley had outside the company occurred after Morley had learned the defendants had taken his idea and were offering only a small amount of equity in return. Furthermore, "absolute secrecy is not required by MUTSA." *Wyeth v. Nat. Biologics, Inc.*, 395 F.3d 897, 900 (8th Cir. 2005). As plaintiffs suggest, a reasonable jury could find defendants misappropriated trade secrets when they acquired the inventions by misrepresenting Morley's co-ownership status or his entitlement to fair equity compensation.

Next, defendants deny that the alleged "trade secrets" have any value because, for example, Square's competitors disparaged the "trade secrets" for the card reader's simple circuitry and lack of encryption. Defendants state that Square had to redesign its readers so that they would perform decoding and encryption on the reader itself instead of on the

mobile device as Morley's trade secrets dictate. Plaintiffs suggest that this industry criticism confirms value because competitors had to scramble to come up with a way to differentiate; as plaintiffs' expert and others articulated, the headphone-jack card reader invention was "disruptive" to the Card Payments Industry, and, critically, Square's redesigned card reader with encryption still practices Morley's trade secret idea of using the headset jack as the input.

Furthermore, plaintiffs provide ample evidence that his idea added value to the business. Commentators called Square a game-changer, citing that the device plugged into the headphone jack. Dorsey is on record stating that the "dongle" was the largest contributor of value until November 2014. In addition, there is evidence that the card reader was a major contributor to Square's early financing efforts.

Finally, with respect to Factor 5 --- the amount of effort spent developing the trade secret --- defendants state that Morley spent less than a day creating prototype from spare parts. In fact, plaintiffs set forth evidence that substantial effort went into creating the prototype, followed by months of research, testing, and fine-tuning. In sum, there is at least a question of fact with regard to whether Trade Secrets #1 and #3 are indeed trade secrets.

b. Trade Secret #2

Trade Secret #2 is the algorithm for decoding the audio signal from the headset-jack card reader on a smart phone. It includes the following steps:

- a. Peak detection;
- b. Determining 1s and 0s from the distance between peaks;

- c. Start sentinel detection;
- d. Error checking: parity and longitudinal redundancy check;
- e. Framing of 5 bit characters in track 2;
- f. Odd parity bit check;
- g. End sentinel detection;
- h. Determination of stable 0s duration in leading 0s;
- i. Low pass filtering to reduce noise;
- j. Inverse filtering to undo phase distortion of high pass filter.

As with Trade Secrets #1 and #3, defendants maintain that this “trade secret” was not a secret at all. First, they argue that Morley himself admitted that the “decoding” did not require any special algorithm, and rather that the algorithm comprises well known and industry-standard techniques to decode a signal from a magnetic stripe. Plaintiffs point out that the defendants had no knowledge of the decoding algorithm, however. In addition, plaintiffs say defendants take Morley’s statements about industry-standard techniques out of context, noting that the statements were in reference to a specific argument by Square regarding noise in the card reader signal --- he clarifies that his statement did not indicate that Morley’s algorithms were not unique and necessary for other purposes unrelated to noise

Further, Morley instructed his former-student-turned-Square-employee Sam Wen on how to write the code, and Square’s own engineer testified that it was “one of the hardest problems I’ve come up against.” Plaintiffs also point out that the same engineer stated that the solutions were not generally available: “There’s not a lot out there on it, and it’s kind of unique the problem we’re solving.” Indeed, whereas card readers predating Morley’s innovation had robust electronic circuitry, employing the algorithm in

an iPhone with minimal circuitry was a novel task. The unique features of the solution included the peak detection process, the use of low-pass and inverse filters to compensate for distortion in the card reader signal, and the manner of determining ones and zeros from the peak detection. Defendants rely on evidence suggesting that only the inverse filtering step was novel, but, even if true, “the fact that some or even most of the information was publicly available is not dispositive of the first factor.” *AvidAir Helicopter Supply*, 663 F.3d at 972.

Yet more disputed issues abound regarding Trade Secret #2. Defendants further argue that the “inverse filtering” step was invented by someone outside the company --- one of Morley’s former graduate students --- but plaintiffs respond that Morley first identified and proposed that step, and he simply had a colleague “crunch the numbers.”

In addition, plaintiffs point to emails confirming Morley’s guidance in addressing peculiarities in implementing the algorithm in context, and Square’s own patent application incorporates concepts reflective of Morley’s decoding methods. Further, plaintiffs say the algorithm secret was essential because it enabled use of card reader trade secret. As for the effort and time it took to develop Trade Secret #2, defendants note that Wen, not Morley, did the programming. Plaintiffs, however, set forth evidence that Morley spent additional time working on developing his own diagnostic programs for the debugging and developing the software; furthermore, McKelvey even acknowledged that “decoding the signal from Square’s audio device is complex, we have been working on the algorithm full-time for over a year.”

Defendants also make a separate argument that they never even used plaintiffs' alleged Trade Secret #2. They state that Square's software lacks the "inverse filtering" step and performs other steps in a different order. Plaintiffs observe, however, that the statute only requires acquisition by improper means to show misappropriation. §417.453(2)(a) RSMo. In addition, plaintiffs' expert has determined that defendants derived their decoding algorithms from Morley's trade secret methods, and source code shows that Square's apps perform most of the steps of Morley's algorithm and include code borrowed from code Morley worked on in May 2009. Thus, plaintiffs' expert opines that the defendants used plaintiffs' trade secret as a "shortcut" and are liable for misappropriation. See Restatement (First) of Torts § 757 (1939) cmt. c (noting that "there is no requirement that he use it in exactly the form in which he received it" and trade secret user may still be liable "even if he uses [the secret] with modifications or improvements upon it."); see also *Stuckes v. National Candy Co.*, 158 S.W.2d 342, 355 (Mo. App. 1911) (holding that, if party used trade secret as "the basis for subsequent experiments," it was still liable "even if . . . defendant made some change . . ."); *Forest Labs, Inc. v. Pillsbury Co.*, 452 F.2d 621 (7th Cir. 1971) (noting the user of a trade secret is liable "as long as the substance of the process used by the actor is derived from the other's secret.").

* * *

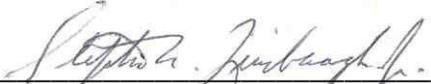
In sum, defendants maintain that Morley's inventions were essentially irrelevant to Square's success, not novel or unknown to the business world, and not valuable to the company. Yet at the same time, Square brought suit against Morley in 2010 seeking to

add McKelvey as an “inventor” on Morley’s patents. Whether or not Morley’s inventions were actually patentable, Square’s own litigation behavior belies its minimization of Morley’s contributions. As with other trade secret litigations, “[t]he parties have provided a great deal of evidence, but that evidence does not point all in one direction. Instead, interpreting it requires many factual and credibility determinations.” *Insituform Techs. v. Reynolds, Inc.*, 4:05CV1116, 2007 WL 1198889, at *2 (E.D. Mo. Apr. 19, 2007), quoted by *Secure Energy, Inc. v. Coal Synthetics, LLC*, 708 F. Supp. 2d 923, 927 (E.D. Mo. 2010). Summary judgment is thus not appropriate on this record.

Accordingly,

IT IS HEREBY ORDERED that defendants’ motion for summary judgment (#296) is **DENIED**.

Dated this 22nd day of April, 2016.



STEPHEN N. LIMBAUGH, JR.
UNITED STATES DISTRICT JUDGE