

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF NEBRASKA

FARMERS EDGE INC., FARMER EDGE  
(US) INC., and FARMERS EDGE (US)  
LLC,

Plaintiffs/Counterclaim  
Defendants,

v.

FARMOBILE LLC, JASON G. TATGE,  
HEATH GARRET GERLOCK, and  
RANDALL THOMAS NUSS,

Defendants/Counterclaim  
Plaintiffs.

CLARKE GERLOCK,

Third-Party Intervenor  
Plaintiff,

v.

FARMERS EDGE INC., FARMER EDGE  
(US) INC., and FARMERS EDGE (US)  
LLC,

Third-Party Defendants.

CASE NO. 8:16-CV-00191-JFB-SMB

**ORDER ON FINAL PRETRIAL  
CONFERENCE**

A final pretrial conference was held on the 25th day of April, 2018. Appearing for the parties as counsel were:

For Plaintiffs/Counterclaim Defendants/Third-Party Defendants (hereinafter "Plaintiffs"), Pat Brookhouser, Luke Holst, and Matt Munro.

For Defendants/Counterclaim Plaintiffs/and Third Party Plaintiffs ("Defendants" or "Farmobile"): Marnie A. Jensen, Joan K. Archer, and Sierra J. Faler.

**(A) Exhibits.** The Parties exchanged exhibit lists on April 2, 2018. The Parties have agreed to exchange final exhibit lists, with objections, on May 2, 2018. The Court approved the Parties' agreement on exhibits by telephone on April 23, 2018. Farmobile is working on a revised Exhibit List but is not sure when that revised List will be done. Depending on when it is done, Plaintiffs may end up serving objections to the Original Exhibit List that was served by Defendants on April 2, 2018.

Caution: Upon express approval of the judge holding the pretrial conference for good cause shown, the parties may be authorized to defer listing of exhibits or objections until a later date to be specified by the judge holding the pretrial conference. The mere listing of an exhibit on an exhibit list by a party does not mean it can be offered into evidence by the adverse party without all necessary evidentiary prerequisites being met.

**(B) Uncontroverted Facts.** The parties have agreed that the following may be accepted as established facts for purposes of this case only:

*[State in detail all uncontroverted facts, including those which are to be stipulated, in such form that the statement may be read to the jury.]*

Plaintiffs state uncontroverted facts that could be read to the jury as follows:

1. Crop Ventures, Inc. was a Nebraska Corporation.
2. Crop Ventures, Inc. was the predecessor in interest to Plaintiffs.
3. Farmobile LLC is a Limited Liability Company.

Plaintiffs object to the Defendants' proposal regarding uncontroverted facts because it mischaracterizes the Summary Judgment briefing (which speaks for itself and does not need to be repeated here) and the effect of that briefing.

Farmobile states that there are no disputed issues of material fact, as set forth in Farmobile's Brief in Support of Motion for Summary Judgment (filing no. 278), Brief in Opposition to Plaintiffs' Motion for Summary Judgment (filing no. 290), and Reply Brief in Support of [Farmobile's] Motion for Summary Judgment (filing no. 305).

Farmobile states that Plaintiffs have admitted the following statements of facts contained in filing no. 278, without any qualification. These facts are therefore uncontroverted and may be read to the jury in the form set forth in filing no. 278:

1, 3, 4, 5, 6, 8, 9, 10, 34, 44, 45, 46, 58, 64, 65, 66, 104, 106, 108, 113, 114, 115, 116, 117, 118, 119, 120, 128, 129, 130, 131, 132, 134, 137, 144, 148, 149, 152, 154, 161, 165, 166, 167, 168, 173, 174, 177, 178, 179, 181, 182, 183, 184, 186, 187, 189, 190, 191, 192, 193, 195, 196, 200, 201, 203, 204, 206, 207, 209, 213, 214, 217, 222, 249, 250, 259, 260, 263, 266, 268, 271, 280, 281, 283, 285, 287, 288, 289, 290, 291, 296, 297, 299, 302, 305, 307, 308, 309, 310, 312, 313, 316, 320, 321, 323, 324, 325, 326, 342, 346, 347, 356, 358, 360, 361, 362, 363, 364, 365, 368, 369, 370, 371, 372, 373, 374, 375, 376, 379, 382, 387, 389, 390, 391, 392, 393, 397, 398, 399, 400, 402, 408, 409, 410, 411, 412, 413, 414, 415, 416, 418, 419, 422, 440, 443, 444, 445, 447, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 469, and 470. (*See*, Filing No. 305 at p. 2.)

Farmobile states that Plaintiffs have also admitted the following statements of facts contained in filing no. 278, due to improper objections, or due to their failure to comply with the Court's local rules. These facts are therefore also uncontroverted and may be read to the jury in the form set forth in filing no. 278:

22, 23, 24, 25, 26, 28, 32, 33, 36, 37, 38, 39, 40, 41, 42, 43, 47, 48, 49, 50, 51, 52, 53, 54, 55, 57, 60, 61, 63, 69, 70, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 105, 107, 109, 110, 111, 112, 123, 124, 133, 135, 136, 138, 139, 146, 147, 150, 151, 153, 158, 159, 162, 163, 164, 171, 172, 175, 185, 202, 212, 215, 218, 219, 220, 221, 223, 224, 225, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 251, 252, 253, 254, 255, 256, 257, 261, 264, 265, 269, 270, 272, 273, 274, 276, 278, 279, 284, 286, 292, 298, 306, 314, 315, 317, 318, 319, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 343, 344, 357, 359, 366, 381, 383, 388, 394, 395, 396, 401, 403, 405, 406, 407, 417, 420, 421, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 441, 442, 442, and 446, and 448. (*Id.* at pp. 3-6).

**(C) Controverted and Unresolved Issues.** The issues remaining to be determined and unresolved matters for the court's attention are:

*[List all legal issues remaining to be determined, setting out in detail each element of the claim or defense which is genuinely controverted (including issues on the merits and issues of jurisdiction, venue, joinder, validity of appointment of a representative of a party, class action, substitution of parties, attorney's fee and applicable law under which it is claimed, and prejudgment interest). Specify any special damages or permanent injuries claimed. In any negligence action, specify elements of negligence and contributory negligence, if any. Any other unresolved matters requiring the court's attention, such as possible consolidation for trial, bifurcated trials on specified issues, and pending motions, shall also be listed.]*

**Controverted and Unresolved Issues.** The issues remaining to be determined and unresolved matters for the Court's attention are:

The Parties were not able to agree on the presentation of the issues remaining to be determined and unresolved matters for the Court's attention. Plaintiffs' proposed statement is

followed by Defendants' proposed statement.

## **Plaintiffs' Statement of the Issues.**

### **Plaintiffs' Statement: Plaintiffs' Claims.**

1. Whether Defendants are liable under the Nebraska Uniform Trade Secrets Act, (Neb. Rev. Stat. §§ 87-501 et seq.) for misappropriation of trade secrets.

a. Whether the claimed trade secrets (as described more completely in the two reports from Aaron Ault) satisfy the statutory definition of trade secrets that covers information (including, but not limited to, a drawing, formula, pattern, compilation, program, device, method, technique, code, or process) that:

(a) Derives independent economic value, actual or potential, from not being known to, and not being 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;

b. If so, whether the Defendants' conduct satisfied the statutory definition of misappropriation, which covers:

i. Acquisition of a trade secret of another by a person (as defined in the statute to include without limitation natural persons, corporations, limited liability companies, and any other legal or commercial entity) who knows or has reason to know that the trade secret was acquired by improper means (as defined by the statute to mean theft, bribery, misrepresentation, breach or inducement of a breach of a duty to maintain secrecy, or espionage through electronic or other means); or

ii. Disclosure or use of a trade secret of another without express or implied consent by a person who:

1. Used improper means to acquire knowledge of the trade secret;
2. At the time of the disclosure or use, knew or had reason to know that his or her knowledge of the trade secret was:

- a. Derived from or through a person who had utilized improper means to acquire it;
- b. Acquired under circumstances giving rise to a duty to maintain its secrecy or limit its use; or
- c. Derived from or through a person who owed a duty to the person seeking relief to maintain its secrecy or limit its use; or
- d. Before a material change of his or her position, knew or had reason to know that the information was a trade secret and that knowledge of it had been acquired by accident or mistake;

- c. Whether it is proper to enter an injunction under the Nebraska Uniform Trade Secrets Act to prevent future misappropriation;
- d. Whether an injunction should condition future use upon payment of a reasonable royalty;
- e. Whether damages in the form of a reasonable royalty in the amount of \$1.25 to \$2.5 million as set forth more fully in the expert report of Andrew Carter should be awarded.

2. Whether the individual Defendants Tatge, Nuss and Heath Gerlock are liable for breach of express and implied contract.
  - a. Whether they breached express written contractual provisions.
  - b. Whether they breached implied contractual obligations including obligations to assign patent interests under the hired to invent doctrine or otherwise.
  - c. If so, whether an injunction should be entered requiring Defendants to assign Defendants' entire right, title and interest in the Farmobile Canadian Patent No. CA 2888742C (the "Canadian Patent") at issue and the allowed U.S. Non-Provisional Patent Application No. 14/434,621 published as U.S. Patent Publication No. 2015/0234767A1 (the "allowed U.S. patent application") that Farmobile abandoned that is at issue (and all parent patent applications thereof and all patent applications or issued patents claiming priority thereto including International Patent Application No. PCT/US2014/056818 (the "PCT Application") at issue and the U.S. Provisional Patent Application Nos. 61/881,320 and 61/881,326 (the "Provisional Patent Applications") filed by Farmobile in September 2013 to Plaintiffs.
  - d. If the obligations were breached, whether an injunction should be entered prohibiting the Defendants from using confidential information that they took from Crop Ventures.
3. Whether the individual Defendants breached duties of good faith and fair dealing.
  - a. If they violated their duties of good faith and fair dealing, whether an injunction should be entered requiring Defendants to assign Defendants' entire right, title and interest in the Farmobile Canadian Patent No. CA 2888742C (the "Canadian

Patent”) at issue and the allowed U.S. Non-Provisional Patent Application No. 14/434,621 published as U.S. Patent Publication No. 2015/0234767A1 (the “allowed U.S. patent application”) that Farmobile abandoned that is at issue (and all parent patent applications thereof and all patent applications or issued patents claiming priority thereto including International Patent Application No. PCT/US2014/056818 (the “PCT Application”) at issue and the U.S. Provisional Patent Application Nos. 61/881,320 and 61/881,326 (the “Provisional Patent Applications”) filed by Farmobile in September 2013 to Plaintiffs.

- b. If the obligations were breached, whether an injunction should be entered prohibiting the Defendants from using confidential information that they took from Crop Ventures.
4. Whether the individual Defendants Tatge, Nuss, and Heath Gerlock are liable for breach of fiduciary duty and duty of loyalty.
    - a. Whether the Defendants used confidential information peculiar to Crop Ventures’ business for their own purposes while employed by Crop Ventures.
    - b. Whether the duty of loyalty extends after an employee quits a business.
    - c. If so, whether the Defendants used confidential information for Defendants’ purposes after leaving Crop Ventures.
    - d. If so, whether they used that confidential information as part of the provisional patent applications filed in September 2013 to which the Canadian Patent at issue and the abandoned but allowed U.S. Patent Application at issue both claim priority.



- e. If so, whether an injunction should be entered requiring Defendants to assign Defendants' entire right, title and interest in the Farmobile Canadian Patent No. CA 2888742C (the "Canadian Patent") at issue and the allowed U.S. Non-Provisional Patent Application No. 14/434,621 published as U.S. Patent Publication No. 2015/0234767A1 (the "allowed U.S. patent application") that Farmobile abandoned that is at issue (and all parent patent applications thereof and all patent applications or issued patents claiming priority thereto including International Patent Application No. PCT/US2014/056818 (the "PCT Application") at issue and the U.S. Provisional Patent Application Nos. 61/881,320 and 61/881,326 (the "Provisional Patent Applications") filed by Farmobile in September 2013 to Plaintiffs.
  - f. If the obligations were breached, whether an injunction should be entered prohibiting the Defendants from using confidential information that they took from Crop Ventures.
5. Whether the Defendants are liable for conversion.
- a. Whether Defendants exerted any wrongful act of dominion over the property of Plaintiffs which deprived the owner of its property permanently or for an indefinite period of time.
  - b. Whether the applicable test is the modern approach followed in the Court's ruling on the motions to dismiss or the older approach advocated by Defendants.
  - c. If Defendants committed conversion, whether an injunction should be entered requiring Defendants to assign Defendants' entire right, title and interest in the Farmobile Canadian Patent No. CA 2888742C (the "Canadian Patent") at issue

and the allowed U.S. Non-Provisional Patent Application No. 14/434,621 published as U.S. Patent Publication No. 2015/0234767A1 (the “allowed U.S. patent application”) that Farmobile abandoned that is at issue (and all parent patent applications thereof and all patent applications or issued patents claiming priority thereto including International Patent Application No. PCT/US2014/056818 (the “PCT Application”) at issue and the U.S. Provisional Patent Application Nos. 61/881,320 and 61/881,326 (the “Provisional Patent Applications”) filed by Farmobile in September 2013 to Plaintiffs.

- d. If Defendants committed conversion, whether an injunction should be entered prohibiting the Defendants from using confidential information that they took from Crop Ventures.
6. Whether the Defendants are liable for trespass to chattels.
    - a. Whether Defendants dispossessed Plaintiffs of a chattel consisting of Plaintiffs’ property rights in the Farmobile Canadian Patent No. CA 2888742C (the “Canadian Patent”) at issue and the allowed U.S. Non-Provisional Patent Application No. 14/434,621 published as U.S. Patent Publication No. 2015/0234767A1 (the “allowed U.S. patent application”) that Farmobile abandoned that is at issue (and all parent patent applications thereof and all patent applications or issued patents claiming priority thereto including International Patent Application No. PCT/US2014/056818 (the “PCT Application”) at issue and the U.S. Provisional Patent Application Nos. 61/881,320 and 61/881,326 (the “Provisional Patent Applications”) filed by Farmobile in September 2013, as well as in confidential information from Crop Ventures;

- b. Whether the chattels' value to Plaintiffs was impaired as to its condition, quality, or value;
  - c. Whether the Plaintiffs are deprived of the use of the chattel for a substantial time;
  - d. Or harm is caused to some person or thing in which the possessor has a legally protected interest.
  - e. Whether the applicable test is the modern approach followed in the Court's ruling on the motions to dismiss or the older approach advocated by Defendants.
  - f. If Defendants committed trespass to chattels, whether an injunction should be entered requiring Defendants to assign Defendants' entire right, title and interest in the Farmobile Canadian Patent No. CA 2888742C (the "Canadian Patent") at issue and the allowed U.S. Non-Provisional Patent Application No. 14/434,621 published as U.S. Patent Publication No. 2015/0234767A1 (the "allowed U.S. patent application") that Farmobile abandoned that is at issue (and all parent patent applications thereof and all patent applications or issued patents claiming priority thereto including International Patent Application No. PCT/US2014/056818 (the "PCT Application") at issue and the U.S. Provisional Patent Application Nos. 61/881,320 and 61/881,326 (the "Provisional Patent Applications") filed by Farmobile in September 2013 to Plaintiffs.
  - g. If Defendants committed trespass to chattels, whether an injunction should be entered prohibiting the Defendants from using confidential information that they took from Crop Ventures.
7. Whether the individual Defendants Tatge, Nuss, and Heath Gerlock are liable for civil conspiracy.

- a. Whether the Defendants combined to accomplish by concerted action an unlawful or oppressive object, or a lawful object by oppressive means.
  - b. If Defendants conspired, whether an injunction should be entered requiring Defendants to assign Defendants' entire right, title and interest in the Farmobile Canadian Patent No. CA 2888742C (the "Canadian Patent") at issue and the allowed U.S. Non-Provisional Patent Application No. 14/434,621 published as U.S. Patent Publication No. 2015/0234767A1 (the "allowed U.S. patent application") that Farmobile abandoned that is at issue (and all parent patent applications thereof and all patent applications or issued patents claiming priority thereto including International Patent Application No. PCT/US2014/056818 (the "PCT Application") at issue and the U.S. Provisional Patent Application Nos. 61/881,320 and 61/881,326 (the "Provisional Patent Applications") filed by Farmobile in September 2013 to Plaintiffs;
  - c. If Defendants conspired, whether an injunction should be entered prohibiting the Defendants from using confidential information that they took from Crop Ventures;
8. Whether Tatge, Gerlock, and Nuss are liable for promissory estoppel;
    - a. Whether they made promises upon which Crop Ventures reasonably relied;
    - b. If so, the damages caused by that reasonable reliance; and
    - c. Whether injustice can only be avoided by enforcing the promise.
  9. Whether the Defendants are liable for violation of the Junkin Act under Neb.Rev.Stat. §§59-801 et seq.

- a. Whether Defendants are persons, corporations, joint stock companies, limited liabilities or associations engaged in business within Nebraska;
  - b. If so, whether Defendants gave any direction or authority to act with the sole purpose of driving Crop Ventures out of business;
  - c. If so, whether Crop Ventures was damaged in an amount of at least \$70,000;
  - d. If so, whether Plaintiffs are entitled to attorneys' fees;
10. Whether the Defendants are liable for tortious interference with a business contract or expectancy.
- a. Whether Defendants interfered with a contractual relationship between Crop Ventures and Ken Forster about which they knew by making untrue statements;
  - b. Whether Defendants engaged in unjustified interference with expectancies with Stephan Richter, DTN, CSS, and AGCO that they knew existed between Crop Ventures and others;
  - c. If a or b are true proof that the interference proximately caused harm in the form of damage to Plaintiffs.
  - d. If so, the amount of that damage, in an amount of at least \$70,000.
11. Whether the Plaintiffs are entitled to a declaratory judgment of ownership and if so, whether an injunction should be entered requiring Defendants to assign Defendants' entire right, title and interest in the Farmobile Canadian Patent No. CA 2888742C (the "Canadian Patent") at issue and the allowed U.S. Non-Provisional Patent Application No. 14/434,621 published as U.S. Patent Publication No. 2015/0234767A1 (the "allowed U.S. patent application") that Farmobile abandoned that is at issue (and all parent patent applications thereof and all patent applications or issued patents claiming priority thereto including International

Patent Application No. PCT/US2014/056818 (the “PCT Application”) at issue and the U.S. Provisional Patent Application Nos. 61/881,320 and 61/881,326 (the “Provisional Patent Applications”) filed by Farmobile in September 2013 to Plaintiffs.

12. Whether the Defendants are liable for misappropriation of trade secrets under the Defend Trade Secrets Act, 18 U.S.C. § 1831 et seq.

- a. Whether the claimed trade secrets (as described more fully in the reports from Aaron Ault) related to a product or service used in or intended for use in interstate or foreign commerce;
- b. Whether the claimed trade secrets fall within the statutory definition of trade secrets which covers all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes, procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing if—
  - i. the owner thereof has taken reasonable measures to keep such information secret; and
  - ii. the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information;
- c. Whether after May 11, 2016, the Defendants engaged in acts that fall within the scope of the statutory definition of misappropriation that covers:

- i. acquisition of a trade secret of another by a person who knows or has reason to know that the trade secret was acquired by improper means; or
- ii. disclosure or use of a trade secret of another without express or implied consent by a person who—
  1. used improper means to acquire knowledge of the trade secret;
  2. at the time of disclosure or use, knew or had reason to know that the knowledge of the trade secret was—
    - a. derived from or through a person who had used improper means to acquire the trade secret;
    - b. acquired under circumstances giving rise to a duty to maintain the secrecy of the trade secret or limit the use of the trade secret; or
    - c. derived from or through a person who owed a duty to the person seeking relief to maintain the secrecy of the trade secret or limit the use of the trade secret; or
    - d. before a material change of the position of the person, knew or had reason to know that—
      - i. the trade secret was a trade secret; and
      - ii. knowledge of the trade secret had been acquired by accident or mistake;
  3. with the the term “improper means”—

- a. including theft, bribery, misrepresentation, breach or inducement of a breach of a duty to maintain secrecy, or espionage through electronic or other means; and
  - b. not including reverse engineering, independent derivation, or any other lawful means of acquisition
- d. Whether it is proper for the Court to enter an injunction preventing future use of the claimed trade secrets;
- e. Whether it is proper to the Court to condition future use of the trade secret upon payment of a reasonable royalty for no longer than the period of time for which such use could have been prohibited;
- f. Whether it is proper for damages to be awarded in the amount of a reasonable royalty in the amount of \$1.25 million to \$2.50 million as set out more fully in the expert reports of Andy Carter;
- g. Whether the trade secrets were misappropriated willfully and maliciously, and if so, the amount of exemplary damages and attorneys' fees to be awarded under the statute;
- h. Whether an act in furtherance of misappropriation was done in the United States if there was misappropriation by Defendants outside the United States.

13. Whether Plaintiffs are entitled to preliminary and permanent injunctive relief restraining and enjoining Defendants, and each of their officers, agents, servants, employees, and attorneys, and those persons in active concert or participation with any of them and having notice of this action from acquiring, using, or disclosing Plaintiffs' trade secrets, or confidential information, now or in the future.



14. Whether Plaintiffs are entitled to preliminary and permanent injunctive relief requiring Defendants and each of their officers, agents, servants, employees, and attorneys, and those persons in active concert or participation with any of them and having notice of this action: to deliver to Plaintiffs or this Court all property, documents, materials, or other things in Defendants' possession which embody, contain, or reference Plaintiffs' trade secrets, or confidential information, including but not limited to any information generated by use or reference to Plaintiffs' trade secrets, or confidential information; and to cause to be assigned to Plaintiffs all patents and patent applications, and rights in the Inventions disclosed therein, derived from Plaintiffs' trade secrets or confidential information, and/or from Inventions conceived by Defendant individuals while an employee of Plaintiffs and their predecessors-in-interest, Crop Ventures and Salus Novus.

15. Whether a constructive trust should be imposed in favor of Plaintiffs and against the Defendants' in the amount of the overall profits received by Defendants from their distribution or sale of products containing features based on or derived from Plaintiffs' trade secrets, confidential information or other intellectual property.

16. Whether Plaintiffs are entitled to an order declaring at least the following: That Plaintiffs are the rightful owners of the entire right, title and interest in the Farmobile Canadian Patent No. CA 2888742C (the "Canadian Patent") at issue and the allowed U.S. Non-Provisional Patent Application No. 14/434,621 published as U.S. Patent Publication No. 2015/0234767A1 (the "allowed U.S. patent application") that Farmobile abandoned that is at issue (and all parent patent applications thereof and all patent applications or issued patents claiming priority thereto including International Patent Application No. PCT/US2014/056818 (the "PCT Application") at

issue and the U.S. Provisional Patent Application Nos. 61/881,320 and 61/881,326 (the “Provisional Patent Applications”) filed by Farmobile in September 2013.

**Plaintiffs’ Statement of Issues: Defendants’ Affirmative Defenses**

1. Whether Plaintiffs are estopped from asserting their claims because of the equitable doctrines of laches, estoppel, unclean hands, and/or waiver.

2. Whether Plaintiffs claims are barred by an alleged failure to mitigate damages, or whether Defendants are entitled to a setoff or credit based on alleged failure to mitigate that would otherwise allegedly result in unjust enrichment.

3. Whether Plaintiffs acted in bad faith by bringing their claim under the Defend Trade Secrets Act of 2016, and if so, the effect of any such finding.

4. Whether Plaintiffs’ contract claims are barred by the doctrine of privity of contract.

5. Whether the statute of frauds bars Plaintiffs’ implied or express oral contract claims. The effect of Defendants’ failure to specify any basis for the statute of frauds to apply.

6. Whether Plaintiffs can prove recoverable injury or damages.

7. Whether Plaintiffs’ claims are barred by the doctrines of Justification, Consent, or Ratification.

8. Whether Plaintiffs’ contract claims are barred by an alleged failure or inadequacy of consideration, whether inadequacy of consideration is a recognizable defense, and whether Plaintiffs’ contract claims are barred by an alleged failure to include essential contract terms.

9. Whether Plaintiffs materially breached the terms of any enforceable agreement(s) with Defendants, and if so, the effect of that breach.

10. Whether Plaintiffs made fraudulent misrepresentations or fraudulently concealed

any facts that induced Individual Defendants to enter into any enforceable agreement, and if so, whether the facts were material and relied upon. If so, whether that is a legal defense to any of Plaintiffs' claims.

11. Whether recovery on Plaintiffs' contract claims would contravene public policy and would constitute an unreasonable restraint of trade.

12. Whether recovery on Plaintiffs' Junkin Act claim would violate Defendants' constitutional rights and the effect of Defendants' failure to specify the constitutional rights.

13. Whether any of Plaintiffs' claims are barred by the applicable statute of limitations based on Plaintiffs' knowledge of Defendants' conduct and failure to file a claim within the applicable statute of limitations period. If so, the effect of Defendants' failure to specify the applicable statute of limitations.

**Plaintiffs Statement Of Issues: Defendants' Counterclaims.**

I. Breach of Contract (Jason Tatge)

- a. Whether Crop Ventures, Inc., Plaintiffs' predecessor in interest, breached its contract with Tatge by allegedly failing to comply with the terms of the Letter Agreement;
- b. Whether there was a meeting of the minds as to all terms upon which Defendant attempts to base recovery;
- c. Whether Tatge complied with his obligations under the contract or breached them in a way that bars recovery;
- d. Whether any claimed breach proximately caused damages to Individual Defendant Tatge;
- e. If so, whether Defendant has admissible proof of the nature and extent of

damages.

II. Unjust Enrichment (Jason Tatge)

- a. Whether there is a claim for unjust enrichment for a subject matter that is not covered by an express contract and outside the scope of his employment;
- b. If so, whether Plaintiffs have been unjustly enriched by their alleged receipt of a benefit from Individual Defendant Tatge when in justice and fairness Plaintiffs allegedly ought to pay Tatge for such benefit;
- c. The extent to which Plaintiffs have been unjustly enriched.

III. Breach of Contract (Heath Gerlock)

- a. Whether Individual Defendant Gerlock entered into an enforceable contract with Crop Ventures;
- b. Whether there was a meeting of the minds on all necessary terms of the claimed contract;
- c. If so, whether Heath Gerlock complied with all of his obligations under the claimed contract or committed a breach that bars recovery;
- d. If so, whether there was a breach of contract by Crop Ventures;
- e. If so, whether Gerlock has sufficient evidence of damages proximately caused by that breach;
- f. If so, whether Gerlock has sufficient evidence of the nature and extent of the damage.

IV. Promissory Estoppel (Heath Gerlock)

- a. Whether Gerlock was promised he would receive a ten percent (10%) ownership interest in Crop Ventures;

- b. Whether Crop Ventures expected or reasonably should have expected the promise to induce Gerlock to rely upon it;
- c. Whether Gerlock in fact, did reasonably rely upon the claimed representation;
- d. Whether Gerlock took action that was detrimental to him;
- e. If so, the amount of any reliance damages; and
- f. Whether injustice can only be avoided by enforcing the promise.

V. Unjust Enrichment (Heath Gerlock)

- a. Whether Heath Gerlock's claim for unjust enrichment covers alleged benefits conferred other than those provided during the course of his providing services for which he was compensated;
- b. Whether Heath Gerlock's claim for unjust enrichment covers alleged benefits conferred other than those covered by a contractual arrangement;
- c. Whether Plaintiffs have been unjustly enriched by their receipt of an alleged benefit from Individual Defendant Gerlock and if so, whether in justice and fairness Plaintiffs ought to pay Gerlock for such benefit;
- d. The extent to which Plaintiffs have been unjustly enriched.

VI. Fraudulent Misrepresentation

- a. Whether Ron Osborne represented to Heath Gerlock that Heath Gerlock would definitely be provided with a 10% equity ownership in Crop Ventures to be awarded at a particular time with no conditions precedent;
- b. Whether Ron Osborne represented to Jason Tatge that Tatge would receive a specific stock option amount at a specific exercise price at a specific time;
- c. Whether those statements were false;

- d. Whether the statements were made fraudulently;
- e. Whether Osborne made the representation(s) with the intention that Gerlock and/or Tatge would rely upon it or them;
- f. Whether Gerlock and/or Tatge did, in fact, so rely, including whether Tatge gave timely notice to exercise options;
- g. Whether the representations were the proximate cause of damage to Gerlock and Tatge;
- h. If so, the nature and extent of that damage.

VII. Nebraska Wage Payment and Collection Act (Jason Tatge)

- a. Whether Crop Ventures was obligated to pay Individual Defendant Tatge wages pursuant to his employment with Crop Ventures;
- b. Whether Tatge performed services and earned wages under his employment without a breach of a duty of loyalty;
- c. Whether Crop Ventures failed to pay Tatge's outstanding claim for wages due and owing within thirty days of the regular payday;
- d. If so, the amount of recoverable wages versus severance under Neb. Rev. St. § 48-1231.

VIII. Declaratory Judgment of Ownership

- a. If the Court finds it has jurisdiction over the Declaratory Judgment claims in this case, whether Farmobile is entitled to a declaration that it is the owner of all right, title, and interest in United States Patent Application No. 2015/0234767, and any other applications or patents that may issue based on or claiming priority to the same.

IX. Defend Trade Secrets Act

- a. Whether Plaintiffs' claim under the Defend Trade Secrets Act of 2016 was brought in bad faith as set forth in the Defend Trade Secrets Act.
- b. If so, whether it is appropriate to award reasonable attorneys' fees to the Defendants and the amount of those reasonable attorneys' fees.

**Plaintiffs' Statement Of Issues: Plaintiffs' Affirmative Defenses To Defendants' Counterclaims.**

1. Whether Defendants' Amended Counterclaims are barred by accord and satisfaction. If individual Defendants accepted payment and/or benefits from and continued to work for Crop Ventures knowing that they did not have the claimed ownership interest and/or stock options or other benefits on which the individual Defendants now base their counterclaims.

2. Whether Defendants Amended Counterclaims are barred by acquiescence, waiver and release. If individual Defendants accepted payment from and continued to work for Crop Ventures knowing full well that they did not have the ownership interest and/or stock options or other benefits on which the individual Defendants now attempt to base their counterclaims.

3. Whether Defendants Amended Counterclaims are barred by consent and ratification. If individual Defendants accepted payment and/or benefits from and continued to work for Crop Ventures knowing that they did not have the claimed ownership interest and/or stock options or other benefits on which the Defendants now base their counterclaims.

4. Whether Defendants' contract Amended Counterclaims are barred for failure or inadequacy of consideration; because the agreements alleged fail to include essential contract terms; and/or because the agreements alleged include indefinite terms. If individual Defendant

Heath Gerlock's alleged contract is missing the following essential terms, or is indefinite regarding those terms: time for performance; place for performance; conditions precedent to grant of ownership; definition of performance; consideration in exchange for the ownership; and the amount of ownership.

5. Whether individual Defendants' contract Amended Counterclaims are barred because performance under the alleged contracts was induced by fraud. If the individual Defendants engaged in wrongful conduct that constituted fraud in the inducement or fraudulent representation. This wrongful conduct included individual Defendants Heath Gerlock and Tatge making representations that they would not disclose or use at any time Confidential Information and would safeguard Confidential Information and protect it against disclosure, misuse, and theft. Wrongful conduct further included individual Defendant Tatge making representations that he would not engage in any other employment, consulting or business activity that would create a conflict of interest with Crop Ventures, and that he would sign Crop Ventures' standard Proprietary Information and Inventions Agreement. Those representations made by individual Defendants were false and were made with knowledge that they were false or both as a positive assertion and recklessly. When individual Defendants made these representations they intended Crop Ventures would rely upon them, thus, substantially contributing to the decision of Crop Ventures to enter into contracts between the parties and to give the individual Defendants access to confidential information including trade secrets. Crop Ventures reasonably relied upon these fraudulent representations and was consequently harmed or damaged as a result of this reliance. In violation of their agreements and obligations, individual Defendants Tatge and Heath Gerlock collected trade secrets and other confidential information of Crop Ventures while employed there and while concealing their intent to take Crop Ventures' trade secrets and other confidential



information to be used at a competing venture, ultimately named Farmobile. After wrongly collecting confidential information and trade secrets of Crop Ventures, individual Defendants resigned from Crop Ventures and formed Farmobile, and used the wrongly acquired information to compete against Crop Ventures.

6. Whether individual Defendant Tatge's wage Amended Counterclaims are barred because the pay to which he claims entitlement does not constitute "wages" under the Nebraska Wage Payment and Collection Act, Neb. Rev. Stat. § 48-1228 et seq. and instead are severance payments.

7. Whether individual Defendant Tatge's wage Amended Counterclaims are barred because Crop Ventures and Plaintiffs did not engage in willful failure to pay wages as required under the Nebraska Wage Payment and Collection Act, Neb. Rev. Stat. § 48-1228 et seq. If Crop Ventures did not willfully fail to pay wages because Tatge was not due wages under the Nebraska Wage Payment and Collection Act, Neb. Rev. Stat. § 48-1228 et seq., and because any failure to pay money to Tatge to which he may have been owed (assuming that there was any such money) was due to his failure to help raise money and his active interference with efforts to raise money engaged in by Crop Ventures.

8. Whether individual Defendant Tatge's wage Amended Counterclaims are barred because Tatge lacks standing to assert a claim under the Nebraska Wage Payment and Collection Act, Neb. Rev. Stat. § 48-1228 et seq. If individual Defendant Tatge did not reside in Nebraska during the time in question and thus is not able to assert a claim under the Nebraska Wage Payment and Collection Act, Neb. Rev. Stat. § 48-1228 et seq. Furthermore, given Tatge's responsibilities as president of Crop Ventures, if Tatge is unable to assert a claim under the Nebraska Wage Payment and Collection Act, Neb. Rev. Stat. § 48-1228 et seq.

9. Whether individual Defendant Tatge's wage Amended Counterclaims are barred because a reasonable dispute exists as to the fact that wages are owed and the amount of any wages allegedly owed, and therefore recovery for the same under the Nebraska Wage Payment and Collection Act, Neb. Rev. Stat. § 48-1228 et seq., is barred. If individual Defendant Tatge violated his duties to Crop Ventures by stealing trade secrets and failing to raise capital and therefore the Nebraska Wage Payment and Collection Act, Neb. Rev. Stat. § 48-1228 et seq., does not apply because Defendant Tatge was not a resident of Nebraska during the time in question, and there was, at the least, a reasonable dispute about whether any amounts of money were due to him.

10. Whether Defendants' Amended Counterclaims are contrary to public policy. If Defendants took trade secret information from Crop Ventures by misrepresenting the origins of the trade secret information to the public; and misrepresenting inventorship and ownership of inventions to the U.S. Patent and Trademark Office, and in international patent application processes. These misrepresentations have resulted in commercial success for Defendant Farmobile products and the application for and/or obtaining of patent rights in the U.S. or other countries for inventions based on Plaintiffs' information which is contrary to public policy.

11. Whether Defendants' Amended Counterclaims are barred by estoppel by contract. If contracts governing the individual Defendants' employment with Crop Ventures did not contain the terms that they now claim should have been in them, and if individual Defendants' continued working knowing that they did not have the ownership interests and/or stock options upon which they now attempt to base their Amended Counterclaims.

12. Whether Defendants' Amended Counterclaims are barred because Defendants have failed, and continue to fail, to act reasonably to mitigate the damages alleged in their

Amended Counterclaims—assuming that any such damages exist—and are barred under the doctrine of avoidable consequences, assuming that any such damages exist. If individual Defendants worked for Crop Ventures knowing full well that they did not have the ownership interests and/or stock options upon which they now attempt to base their Amended Counterclaims.

13. Whether Defendants have failed to state counterclaims upon which relief may be granted.

14. Whether Defendants' Amended Counterclaims are barred because of fraud on the United States Patent and Trademark Office. If the Defendants have misused the patent prosecution system in their patent applications for inventions belonging to Crop Ventures and Plaintiffs. If the Defendants benefited from the trade secret and intellectual property taken from Crop Ventures by misrepresenting the origins and ownership of the intellectual property and inventions to the U.S. Patent and Trademark Office, and in the international patent application processes.

15. Whether Defendants' Amended Counterclaims are barred by impossibility and impracticability. If Crop Ventures had financial difficulty because of individual Defendant Tatge's failure to comply with his representations that he would undertake his financing role in earnest and with undivided loyalty to Crop Ventures. If Tatge neglected to secure sufficient new capital for Crop Ventures or undertake his financing role in earnest and with undivided loyalty to Crop Ventures. If there were other causes beyond Crop Ventures' control that prevented Crop Ventures from awarding any ownership interests and/or stock options upon which the individual Defendants now attempt to base their claims (assuming for the sake of argument that those would have been provided or awarded if the conditions had been satisfied).

16. Whether Defendants' Amended Counterclaims are barred by laches. If individual Defendants worked for Crop Ventures knowing full well that they did not have the ownership interests and/or stock options on which the Defendants now attempt to base their Amended Counterclaims.

17. Whether Defendants' Amended Counterclaims are barred by prevention and frustration. If there were conditions precedent to the grant of any alleged ownership interest and/or stock options on which the individual Defendants now attempt to base their Amended Counterclaims, and those conditions precedent did not occur because of events beyond Crop Ventures' control, including Defendant Tatge's failure to raise funds.

18. Whether Defendants' Amended Counterclaims are barred by the statute of frauds. If the evidence demonstrates that agreements between the parties could not be performed and are incapable of being performed within one (1) year from the making thereof.

19. Whether the Defendants' Amended Counterclaims are barred by the statute of limitations. If Heath Gerlock's Amended Counterclaims are barred by the applicable four year statutes of limitations (Neb. Rev. Stat. §§ 25-206 & 25-207 & 25-211 & 25-212) because the statute of limitations all expired before the date when the original counterclaims were asserted on July 8, 2016.

20. Whether Defendants' Amended Counterclaims are barred by offer or tender of payment. If the individual Defendants accepted payment or other benefits from and continued to work for Crop Ventures without requiring an agreement on the alleged promises of ownership interest and/or stock options on which the individual Defendants now base their counterclaims.

21. Whether Defendants' Amended Counterclaims are barred by unclean hands and unlawful conduct. If the Defendants acted inequitably, unfairly, or dishonestly in acquiring

confidential information and trade secrets of Crop Ventures while employed there and while concealing their intent to take Crop Ventures' trade secrets and confidential information to be used at a competing venture, ultimately named Farmobile. If after wrongly obtaining confidential information and trade secrets of Crop Ventures, Defendants resigned from Crop Ventures and formed Farmobile, and used the wrongly acquired information to compete against Crop Ventures and to obtain patent rights.

22. Whether Defendants' Amended Counterclaims are barred by unjust enrichment. If the individual Defendants' acceptance of payments or other benefits including continued employment by Crop Ventures constituted a benefit received without justice and fairness. If the individual Defendants acted inequitably, unfairly, or dishonestly in acquiring confidential information and trade secrets of Crop Ventures while employed there and while concealing their intent to take Crop Ventures' trade secrets and confidential information to be used at a competing venture, ultimately Farmobile. If after wrongly obtaining confidential information and trade secrets of Crop Ventures, individual Defendants resigned from Crop Ventures and formed Farmobile, and used the wrongly acquired information to compete against Crop Ventures.

23. Whether Defendants are estopped from asserting any of the Amended Counterclaims upon which they seek relief. If the Defendants engaged in conduct which amounts to a false representation or concealment of material fact, including but not limited to, individual Defendants Heath Gerlock and Tatge making representations that they would not disclose or use at any time Confidential Information and would safeguard Confidential Information and protect it against disclosure, misuse, espionage, loss and theft. Wrongful conduct further includes Tatge making claimed representations that he would not engage in any other employment, consulting or business activity that would create a conflict of interest with

Crop Ventures, and that he would sign Crop Ventures' standard Proprietary Information and Inventions Agreement. When individual Defendants made these representations they intended, or had at least the expectation, that Crop Ventures would rely upon them, thus, substantially contributing to the decision of Crop Ventures to enter into contracts between the parties. These representations made by individual Defendants were false and were made with knowledge that they were false and with knowledge, actual or constructive, of the real facts. Crop Ventures lacked knowledge of the real facts and thus reasonably relied upon individual Defendants' fraudulent representations in good faith and was consequently harmed or damaged as a result of this reliance. In violation of their representations and obligations, individual Defendants Tatge and Heath Gerlock collected confidential information and trade secrets of Crop Ventures while employed there and while concealing their intent to take Crop Ventures' trade secrets and confidential information to be used at a competing venture, ultimately named Farmobile. After wrongly collecting confidential information and trade secrets of Crop Ventures, individual Defendants resigned from Crop Ventures and formed Farmobile, and used the wrongly acquired information to compete against Crop Ventures.

24. Whether Defendants' Amended Counterclaims are barred because Crop Ventures and Plaintiffs fully complied with the terms of any agreements and because Defendants breached their agreements. If individual Defendants Tatge and Heath Gerlock materially breached their express and implied agreements with Crop Ventures and misappropriated Crop Ventures' intellectual properties and trade secrets when they abandoned Crop Ventures, including taking with them confidential Crop Ventures' documents. If in violation of their agreements and obligations, Tatge and Heath Gerlock collected confidential information and trade secrets of Crop Ventures while employed there and while concealing their intent to take Crop Ventures'

trade secrets and confidential information to be used at a competing venture, ultimately named Farmobile. If after wrongly collecting confidential information and trade secrets of Crop Ventures, Defendants resigned from Crop Ventures and formed Farmobile, and used the wrongly acquired information to compete against Crop Ventures.

25. Whether Defendants' Amended Counterclaims are barred because any damage allegedly suffered was not caused by any act of Crop Ventures or Plaintiffs, but rather was the direct and proximate result of the intervening acts of Defendants and/or third parties. If there were conditions precedent to the grant of any alleged ownership interest and/or stock options on which the Defendants now base their Amended Counterclaims. If these conditions precedent did not occur because of events beyond Crop Ventures' control, including the failure of Tatge to raise funds.

26. Whether Defendants' Amended Counterclaims are barred because any alleged untrue statements, omissions, misleading statements, or other allegedly actionable conduct attributed to Crop Ventures or Plaintiffs (all of which are denied) did not relate to material facts. If Plaintiffs' or Crop Ventures' alleged untrue statements, omissions, misleading statements, or other allegedly actionable conduct are not "material facts" because Defendants accepted payment from and worked for Crop Ventures knowing full well that they did not have the ownership interests and/or stock options upon which they now attempt to base their Amended Counterclaims.

27. Whether Defendants Heath Gerlock and Tatge's Amended Counterclaims alleging Fraudulent Misrepresentation are barred by the economic loss doctrine. Plaintiffs assert this Affirmative Defense to preserve it for the record, recognizing the Court's ruling on the Motion To Dismiss Clarke Gerlock's Third-Party Complaint.

28. If individual Defendants Tatge and Gerlock are impermissibly attempting to assert tort claims claiming economic damages.

**Plaintiffs' Statement Of Issues: Third-Party Intervenor Plaintiffs' Claims**

I. Breach of Contract (Clarke Gerlock)

- a. Whether Third Party Plaintiff Gerlock entered into an enforceable contract with Crop Ventures;
- b. Whether there was a meeting of the minds on all necessary terms of the claimed contract;
- c. If so, whether there was a breach of contract by Crop Ventures;
- d. If so, whether Gerlock has sufficient evidence of damages proximately caused by that breach;
- e. If so, whether Gerlock has sufficient evidence of the nature and extent of the damage.

II. Promissory Estoppel (Clarke Gerlock)

- a. Whether Third Party Plaintiff Gerlock was promised he would receive a ten percent (10%) ownership interest in Crop Ventures;
- b. If so, whether Crop Ventures expected or reasonably should have expected Clarke Gerlock to rely upon that promise;
- c. If so, whether Gerlock in fact did reasonably rely upon that promise;
- d. If so, the extent of damages caused by that reasonable reliance; and
- e. Whether injustice can only be avoided by enforcing the promise.

III. Unjust Enrichment (Clarke Gerlock)

- a. Whether Plaintiffs have been unjustly enriched by their receipt of a benefit from



Individual Defendant Gerlock when in justice and fairness Plaintiffs ought to pay Gerlock for such benefit;

- b. The extent to which Plaintiffs have been unjustly enriched.

#### IV. Fraudulent Misrepresentation

- a. Whether Ron Osborne represented to Clarke Gerlock that Clarke Gerlock would definitely be provided with a 10% equity ownership in Crop Ventures to be awarded at a particular time with no conditions precedent;
- b. If so, whether that statement was false;
- c. If so, whether Osborne made the statement fraudulently;
- d. If so, whether Osborne made the representation(s) with the intention that Gerlock would rely upon it;
- e. If so, whether Gerlock did, in fact, so rely;
- f. If so, whether the representation was the proximate cause of damage to Gerlock and Tatge;
- g. If so, the nature and extent of that damage.

#### **Plaintiffs' Statement of Issues: Affirmative Defenses To Third-Party Intervenor Plaintiffs' Claims.**

1. Whether Clarke Gerlock's claims are barred by accord and satisfaction. If Clarke Gerlock performed any claimed work on behalf of Crop Ventures (assuming for the sake of argument that he did) knowing full well that he did not have the alleged ownership interests and/or stock options on which he now attempts to base his claims.

- 2. Whether Clarke Gerlock's claims are barred by acquiescence, waiver and release.

If Clarke Gerlock performed any claimed work on behalf of Crop Ventures (assuming for the sake of argument that he did) knowing full well that he did not have the alleged ownership interests and/or stock options on which he now attempts to base his claims.

3. Whether Clarke Gerlock's claims are barred by consent and ratification. If Clarke Gerlock performed any claimed work on behalf of Crop Ventures (assuming for the sake of argument that he did) knowing full well that he did not have the alleged ownership interests and/or stock options on which he now attempts to base his claims.

4. Whether Clarke Gerlock's claims are barred for failure or inadequacy of consideration; because the agreements alleged fail to include essential contract terms; and because the agreements alleged include indefinite terms. If Clarke Gerlock's alleged contract is missing at least the following essential terms, and/or the terms are indefinite: time for performance; place for performance; conditions precedent to grant of ownership; definition of performance; consideration in exchange for the ownership; and the amount of ownership.

5. Whether Clarke Gerlock's claims are barred because Clarke Gerlock failed, and continues to fail, to act reasonably to mitigate the damages alleged in his claims; and is barred under the doctrine of avoidable consequences.

6. If Clarke Gerlock performed any claimed work on behalf of Crop Ventures (assuming for the sake of argument that he did) knowing full well that he did not have the alleged ownership interests and/or stock options on which he now attempts to base his claims.

7. Whether Clarke Gerlock has failed to state claims upon which relief can be granted.

8. Whether Clarke Gerlock's claims are barred by impossibility and impracticability. If Crop Ventures had financial difficulty because of individual Defendant Tatge's failure to

comply with his representations that he would undertake his financing role in earnest and with undivided loyalty to Crop Ventures. If Tatge neglected to secure sufficient new capital for Crop Ventures or undertake his financing role in earnest and with undivided loyalty to Crop Ventures. If other causes beyond Crop Ventures' control also prevented Crop Ventures from awarding any ownership interests and/or stock options upon which Clarke Gerlock now attempts to base his claims (assuming for the sake of argument that those would have been provided or awarded if the conditions had been satisfied).

9. Whether Clarke Gerlock's claims are barred by laches. If Clarke Gerlock performed any claimed work on behalf of Crop Ventures (assuming for the sake of argument that he did) knowing full well that he did not have the alleged ownership interests and/or stock options on which he now attempts to base his claims.

10. Whether Clarke Gerlock's claims are barred by prevention and frustration. If there were conditions precedent to the grant of any alleged ownership interest and/or stock options on which Clarke Gerlock now bases his claims, and those conditions precedent did not occur because of the failure by individual Defendant Tatge to loyally and earnestly work to raise funds and because of other events beyond Crop Ventures' control.

11. Whether Clarke Gerlock's claims are barred by the statute of frauds. If the evidence demonstrates that agreements between the parties could not be performed and are incapable of being performed within one (1) year from the making thereof then the statute of frauds, Neb. Rev. Stat. § 36-202, applies.

12. Whether Clarke Gerlock's claims are barred by the statute of limitations. If Clarke Gerlock's counterclaims are outside the four-year statute of limitations because they accrued, with his full knowledge that he was not granted an ownership interest in Crop Ventures,

before October 7, 2012 (four years prior to when he filed his third-party claims). (*See* Neb. Rev. Stat. §§ 25-206 & 25-207 & 25-211 & 25-212)

13. Whether Clarke Gerlock's claims are barred by offer or tender of payment. If Clarke Gerlock performed any claimed work on behalf of Crop Ventures (assuming for the sake of argument that he did) knowing full well that he did not have the alleged ownership interests and/or stock options on which he now attempts to base his claims.

14. Whether Clarke Gerlock's claims are barred by unclean hands and unlawful conduct. If Clarke Gerlock acted inequitably, unfairly, or dishonestly to work with the Defendants to misappropriate Crop Ventures' trade secrets and help the Defendants violate their duties to Crop Ventures.

15. Whether Clarke Gerlock's claims are barred by unjust enrichment. If Clarke Gerlock acted inequitably, unfairly, or dishonestly to work with the Defendants to misappropriate Crop Ventures' trade secrets and help the Defendants violate their duties to Crop Ventures.

16. Whether Clarke Gerlock, by his own conduct, has waived and is estopped from asserting any of the claims upon which he seeks relief. If Clarke Gerlock acted inequitably, unfairly, or dishonestly to work with the Defendants to misappropriate Crop Ventures' trade secrets and help the Defendants violate their duties to Crop Ventures while making misrepresentations to Crop Ventures.

17. Whether Clarke Gerlock's claims are barred because Plaintiffs fully complied with the terms of any agreements and because Clarke Gerlock breached his agreements. If Clarke Gerlock acted inequitably, unfairly, or dishonestly to work with the Defendants to misappropriate Crop Ventures' trade secrets and help the Defendants violate their duties to Crop

Ventures while making misrepresentations to Crop Ventures.

18. Whether Clarke Gerlock's claims are barred because any damage allegedly suffered was not caused by any act of Plaintiffs, but rather was the direct and proximate result of the intervening acts of Farmobile, Jason Tatge, Heath Gerlock, Randall Nuss and/or third parties. If there were conditions precedent to the grant of any alleged ownership interest and/or stock options on which Clarke Gerlock now bases his claims. These conditions precedent did not occur because of events beyond Crop Ventures' control, including the failure of Tatge to raise funds.

19. Whether Clarke Gerlock's claims are barred because any alleged untrue statements, omissions, misleading statements, or other allegedly actionable conduct attributed to Plaintiffs (all of which are denied) did not relate to material facts. Whether Plaintiffs' or Crop Ventures' alleged untrue statements, omissions, misleading statements, or other allegedly actionable conduct are not "material facts" because Clarke Gerlock worked at Crop Ventures knowing full well that he did not have ownership interest and/or stock options on which Clarke Gerlock now bases his claims.

20. Whether Clark Gerlock's claims alleging Fraudulent Misrepresentation are barred by the economic loss doctrine. Plaintiffs assert this Affirmative Defense to preserve it for the record, recognizing the Court's ruling on the Motion To Dismiss Clarke Gerlock's Third-Party Complaint.

**Defendants' Statement of the Issues:**

**Plaintiffs' Claims:**

I. Nebraska Misappropriation of Trade Secrets

- a. Whether and which of Plaintiffs' alleged "trade secrets" constitute protectable

trade secrets under Nebraska law, which requires determining whether and which of such alleged “trade secrets” both:

- i. Derive independent economic value to the Plaintiffs from not being known to or ascertainable by proper means by other persons who can obtain economic value from such “trade secret’s” disclosure or use; and
  - ii. Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy;
- b. Whether and the extent to which any of the alleged “trade secrets” had value and importance to Plaintiffs’ business;
- c. Whether Plaintiffs had the right by reason or discovery or ownership to the use and enjoyment of the alleged “trade secret(s);”
- d. If any of the alleged “trade secrets” qualify under Nebraska law, whether any of Defendants engaged in conduct meeting the definition for “misappropriation” under Nebraska law;
- e. If Defendants misappropriated any qualifying “trade secret,” whether and the extent to which Plaintiffs are entitled to a remedy for such conduct, including whether Plaintiffs are entitled to either or both of (1) injunctive relief, or (2) monetary damages.

## II. Breach of Express and Implied Contract

- a. Whether Individual Defendants Tatge, Nuss, and/or Gerlock entered into enforceable contracts with Plaintiffs’ predecessor in interest, Crop Ventures;
- b. The scope, obligations, and terms of such enforceable contract(s);
- c. Whether Crop Ventures performed on such contract(s);

- d. Whether Individual Defendants breached such contract(s); and
- e. Whether and the extent to which Plaintiffs have been damaged by Defendants' alleged breach;

III. Breach of Implied Covenant of Good Faith and Fair Dealing

- a. Whether any of Individual Defendants entered into enforceable contracts with Crop Ventures;
- b. The justifiable expectations of the parties to and the purposes and express terms of any such contract;
- c. Whether any of Individual Defendants violated, nullified, or significantly impaired a benefit of such contract(s);
- d. If Individual Defendant(s) so-acted, the measure and extent that Plaintiffs have been damaged by such action.

IV. Breach of Fiduciary Duty and Duty of Loyalty

- a. Whether any of Individual Defendants owed Plaintiffs a fiduciary duty;
- b. Whether any such fiduciary duty continued to exist after the termination of the relationship between Plaintiffs and Individual Defendants;
- c. Whether any of Individual Defendants breached such a fiduciary duty;
- d. Whether and the extent to which any such breach of fiduciary duty caused an injury to Plaintiffs.

V. Conversion

- a. Whether the "property" at-issue that is subject to a claim for conversion under Nebraska law, including whether Nebraska would follow the "traditional" or "modern" rule for identifying qualifying property interests in intangibles and

whether the “property” at-issue meets either definition;

- b. Whether Plaintiffs were the owners of any qualifying property;
- c. Whether Defendants fully and completely deprived Plaintiffs of such property;
- d. Whether and the extent to which Plaintiffs have been damaged by Defendants’ conduct.

VI. Trespass to Chattels

- a. Whether the “property” at-issue that is subject to a claim for trespass to chattels under Nebraska law, including whether Nebraska would follow the “traditional” or “modern” rule for identifying qualifying property interests in intangibles and whether the “property” at-issue meets either definition;
- b. Whether Plaintiffs were the owners of any qualifying property;
- c. Whether Defendants less-than fully and completely deprived Plaintiffs of such property or otherwise caused it’s condition, quality, or value to be impaired;
- d. Whether and the extent to which Plaintiffs have been damaged by Defendants’ conduct.

VII. Civil Conspiracy

- a. Whether two or more of the Defendants joined together in a concerted action to accomplish an unlawful or oppressive object, or a lawful object by unlawful or oppressive means;
- b. Whether the Defendants have engaged in an underlying tort;
- c. Whether and the extent to which Plaintiffs have been damaged by such conduct.

VIII. Promissory Estoppel.

- a. Whether Individual Defendants made certain alleged promises to Crop Ventures;



- b. Whether Individual Defendants expected or reasonably should have expected their promises to induce Crop Ventures into hiring individual Defendants and providing individual Defendants access to allegedly confidential information.
- c. Whether Crop Ventures were, in fact, induced to hire Individual Defendants and provide such access to information.
- d. Whether Crop Ventures took action that was detrimental to itself;
- e. Whether and the extent to which justice requires Individual Defendants to reimburse Plaintiffs for alleged damages Crop Ventures suffered as a result of the promise.

IX. Junkin Act

- a. Whether Defendants engaged in intentional predatory conduct that has no purpose other than to drive Plaintiffs out of business;
- b. Whether Defendants were successful in their efforts;
- c. Whether and the extent to which Plaintiffs have been damaged by such conduct.

X. Tortious Interference with Business Relationship or Expectancy

- a. Whether Plaintiffs had a valid business relationship or expectancy or multiple valid business relationships or expectancies, including but not limited to with Ken Forster, DTN, Agco, Stefan Richter, CSS, Chad Williams, and/or Frank and Kimberlee Spillers;
- b. Whether Defendants had knowledge of such relationship or expectancy;
- c. Whether Defendants engaged in an intentional act of interference with that relationship or expectancy;
- d. Whether such intentional act was justified;

- e. Whether such act caused harm allegedly sustained by Plaintiffs;
- f. Whether and the extent to which Plaintiffs have been damaged by Defendants' conduct.

XI. Declaratory Judgment

- a. Whether the subject matter of Plaintiffs' declaratory judgment claim will be fully resolved in the state-court action pending between the Parties;
- b. Whether declaratory relief will require the Court to determine the issue of inventorship;
- c. Whether this Court has jurisdiction to entertain Plaintiffs' claim and their request for assignment of foreign patents;
- d. If the Court entertains Plaintiffs' claim, whether the facts demonstrate that Plaintiffs are entitled to a declaratory judgment of ownership of U.S. Patent Application No. 14/434,621, International Patent Application No. PCT/US2014/056818 and Canadian Patent No. CA2888742C, including all applications and/or patents, foreign and domestic, claiming priority to the same.

XII. Defend Trade Secrets Act of 2016 Misappropriation of Trade Secrets

- a. Whether the Defend Trade Secrets Act of 2016 (the "DTSA") applies to the alleged acts of misappropriation at-issue here when Individual Defendants left Crop Ventures' employment in July of 2013;
- b. Whether and which of Plaintiffs' alleged "trade secrets" constitute protectable trade secrets under the DTSA, which requires determining whether and which of such alleged "trade secrets" both:
  - i. Derive independent economic value to the Plaintiffs from not being

generally known to or readily ascertainable by proper means by other persons who can obtain economic value from such “trade secret’s” disclosure or use; and

- ii. Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy;
- c. Whether and the extent to which any of the alleged “trade secrets” had value and importance to Plaintiffs’ business;
- d. Whether Plaintiffs had the right by reason or discovery or ownership to the use and enjoyment of the alleged “trade secret(s);”
- e. If any of the alleged “trade secrets” qualify under the DTSA, whether any of Defendants engaged in conduct meeting the definition for “misappropriation” under the DTSA;
- f. If Defendants misappropriated and qualified “trade secret,” whether and the extent to which Plaintiffs are entitled to a remedy for such conduct, including whether Plaintiffs are entitled to either or both of (1) injunctive relief, or (2) monetary damages;
- g. Whether, if all above conditions are satisfied, such misappropriation was willful and malicious, in which case a determination of additional damages and fees arising out of the DTSA.

XIII. Plaintiffs’ Requests for Relief (applicable to all of Plaintiffs’ claims)

- a. Whether Plaintiffs are legally or equitably entitled to recover on any and/or which of their requests for relief set forth in their Amended Complaint, Doc. No. 40.
- b. Whether Nebraska and/or federal law permits Plaintiffs to obtain injunctive relief,

and whether such relief is appropriate to all parties, including the patent owner, on any of their claims.

- c. Whether Nebraska and/or federal law permits Plaintiffs to recover injunctive relief and monetary damages arising out of the same conduct and same claims.
- d. Whether Nebraska and/or federal law entitles Plaintiffs to any relief, including but not limited to, injunctive relief or other relief declaring ownership and/or assignment of the entire right, title, and interest in the Farmobile Canadian Patent No. CA 2888742C (the “Canadian Patent”) at issue and the allowed U.S. Non-Provisional Patent Application No. 14/434,621, published as U.S. Patent Publication No. 2015/0234767A1 (the “allowed U.S. patent application) and all parent patent applications thereof and all patent applications or issued patents claiming priority thereto including International Patent Application No. PCT/US2014/056818 (the “PCT Application”) at issue and the U.S. Provisional Patent Application Nos. 61/881,320 and 61/881,326 (the “Provisional Patent Applications”) filed by Farmobile in September 2013.

#### **Defendants’ Affirmative and Additional Defenses**

1. Whether Plaintiffs are estopped from asserting their claims because of the equitable doctrines of laches, estoppel, unclean hands, and/or waiver based on the fact that Plaintiffs cannot recover in equity when their own conduct renders any such recovery inequitable.
2. Whether Plaintiffs’ failure to make reasonable and diligent efforts to mitigate any actual damages bars and/or limits their recovery, or whether Defendants are entitled to a setoff or credit with respect to any amount that might be awarded in the amounts that could

have reduced with reasonable and diligent efforts and which would otherwise result in unjust enrichment.

3. Whether Plaintiffs acted in bad faith by bringing their claim under the Defend Trade Secrets Act of 2016 with no reasonable basis under the law for asserting this claim, thereby barring recovery and entitling Defendants to an award of attorneys' fees pursuant to 18 U.S.C. § 1836(b)(3)(D).
4. Whether Plaintiffs' contract claims are barred because privity of contract is absent between Plaintiffs and the Individual Defendants.
5. Whether the statute of frauds bars Plaintiffs' implied or express oral contract claims.
6. Whether Plaintiffs' claims are barred because they have not suffered any recoverable injury or damages.
7. Whether Plaintiffs' claims are barred by the legal excuses of Justification, Consent, and Ratification because any breach of any enforceable contract or any use of an alleged trade secret was justified
8. Whether Plaintiffs' contract claims are barred for Failure or Inadequacy of Consideration and for Failure to include essential contract terms.
9. Whether Plaintiffs' contract claims fail because Defendants fully complied with the terms of any enforceable agreement(s) with Plaintiffs.
10. Whether Plaintiffs' fraudulent misrepresentations and concealment in inducing Individual Defendants to enter into any enforceable agreement bars Plaintiffs' ability to recover in law or equity.
11. Whether Plaintiffs' contract claims are barred because recovery thereon would contravene public policy and would constitute an unreasonable restraint of trade because

any such contract would be greater than reasonable necessary to protect Salus Novus/Crop Ventures and would be unduly harsh and oppressive to Individual Defendants.

12. Whether recovery on Plaintiffs' Junkin Act claim would violate Defendants' constitutional rights.

13. Whether any of Plaintiffs' claims are barred by the applicable statute of limitations based on Plaintiffs' knowledge of Defendants' conduct and failure to file a claim within the applicable statute of limitations period.

### **Defendants' and Third-Party Plaintiff's Statement Of Plaintiffs' Affirmative Defenses.**

Defendants and Third-Party Plaintiff dispute the characterization and applicability of Plaintiffs' 28 Affirmative Defenses to Defendants' Counterclaims and dispute the characterization and applicability of Plaintiffs' 20 Affirmative Defenses to Third-Party Plaintiff's claims.

### **Defendants' Counterclaims**

#### **I. Breach of Contract (Jason Tatge)**

- a. Whether Crop Ventures, Inc., Plaintiffs' predecessor in interest, breached its contract with Tatge by failing to comply with the terms of the Letter Agreement;
- b. Whether Plaintiffs' conduct caused damages to Individual Defendant Tatge;
- c. The extent of such damages.

#### **II. Unjust Enrichment (Jason Tatge)**

- a. Whether Plaintiffs have been unjustly enriched by their receipt of a benefit from Individual Defendant Tatge when in justice and fairness Plaintiffs ought to pay Tatge for such benefit;

- b. The extent to which Plaintiffs have been unjustly enriched.

III. Breach of Contract (Heath Gerlock)

- a. Whether Individual Defendant Gerlock entered into an enforceable contract with Crop Ventures;
- b. Whether Individual Defendant Gerlock is entitled to recover for breach of contract when Crop Ventures failed to provide him a ten percent (10%) ownership interest in Crop Ventures and additional cash compensation pursuant to that contract, and that Gerlock was damaged as a result of the breach of that contract.

IV. Promissory Estoppel (Heath Gerlock)

- a. Whether Gerlock was promised he would receive a ten percent (10%) ownership interest in Crop Ventures and additional cash compensation in exchange for his services;
- b. Whether Crop Ventures expected or reasonably should have expected the promise to induce Gerlock to provide services;
- c. Whether Gerlock was, in fact, induced to provide services to Crop Ventures;
- d. Whether Gerlock took action that was detrimental to him;
- e. Whether justice requires that Plaintiffs reimburse Gerlock for the damages he incurred as a result of the promise.

V. Unjust Enrichment (Heath Gerlock)

- a. Whether Plaintiffs have been unjustly enriched by their receipt of a benefit from Individual Defendant Gerlock when in justice and fairness Plaintiffs ought to pay Gerlock for such benefit;
- b. The extent to which Plaintiffs have been unjustly enriched.

VI. Fraudulent Misrepresentation

- a. Whether Ron Osborne made a representation or representations that were false;
- b. Whether Osborne knew the representation(s) were false or were made recklessly without knowledge of their truth and as a positive assertion;
- c. Whether Osborne made the representation(s) with the intention that Gerlock and/or Tatge would rely upon it or them;
- d. Whether Gerlock and/or Tatge did, in fact, so rely;
- e. Whether and the extent to which Gerlock and/or Tatge were damaged as a result of the misrepresentation(s).

VII. Nebraska Wage Payment and Collection Act (Jason Tatge)

- a. Whether Crop Ventures was obligated to pay Individual Defendant Tatge wages pursuant to his employment with Crop Ventures;
- b. Whether Tatge performed services and earned wages under his employment;
- c. Whether Crop Ventures failed to pay Tatge's outstanding claim for wages due and owing;
- d. Whether and how much Tatge is entitled to recover under Neb. Rev. St. § 48-1231.

VIII. Declaratory Judgment of Ownership

- a. If the Court finds it has jurisdiction over the Declaratory Judgment claims in this case despite the Nebraska state-court action and the separate Canadian litigation, the issue of inventorship, and the implication of foreign patents, whether Farmobile is the owner of all right, title, and interest in United States Patent Application No. 2015/0234767, and any other applications or patents that may



issue based on or claiming priority to the same.

IX. Bad Faith—Defend Trade Secrets Act

- a. Whether Plaintiffs claim under the Defend Trade Secrets Act of 2016 was brought the claim arbitrarily, capriciously, and unreasonably.
- b. Whether and the extent to which Defendants are entitled to fees and costs arising out of the DTSA.

**Third-Party Plaintiff's Claims**

I. Breach of Contract (Clarke Gerlock)

- a. Whether Third Party Plaintiff Gerlock entered into an enforceable contract with Crop Ventures;
- b. Whether Gerlock is entitled to recover for breach of contract when Crop Ventures failed to provide him a ten percent (10%) ownership interest in Crop Ventures and additional cash compensation pursuant to that contract, and that Gerlock was damaged as a result of the breach of that contract.

II. Promissory Estoppel (Clarke Gerlock)

- a. Whether Third Party Plaintiff Gerlock was promised he would receive a ten percent (10%) ownership interest in Crop Ventures and additional cash compensation in exchange for his services;
- b. Whether Crop Ventures expected or reasonably should have expected the promise to induce Gerlock to provide services;
- c. Whether Gerlock was, in fact, induces to provide services to Crop Ventures;
- d. Whether Gerlock took action that was detrimental to him;
- e. Whether justice requires that Plaintiffs reimburse Gerlock for the damages he

incurred as a result of the promise.

III. Unjust Enrichment (Clarke Gerlock)

- a. Whether Plaintiffs have been unjustly enriched by their receipt of a benefit from Individual Defendant Gerlock when in justice and fairness Plaintiffs ought to pay Gerlock for such benefit;
- b. The extent to which Plaintiffs have been unjustly enriched.

IV. Fraudulent Misrepresentation

- a. Whether Ron Osborne made a representation or representations that were false;
- b. Whether Osborne knew the representation(s) were false or were made recklessly without knowledge of their truth and as a positive assertion;
- c. Whether Osborne made the representation(s) with the intention that Gerlock would rely upon it or them;
- d. Whether Gerlock did, in fact, so rely;
- e. Whether Gerlock was damaged as a result of the misrepresentation(s).

**Pending Motions**

- Defendants' Motion to Exclude Expert Testimony of Aaron Ault (Dkt. No. 256);
- Defendants' Motion for Summary Judgment (Dkt. No. 257);
- Plaintiffs' Motion for Partial Summary Judgment (Dkt. No. 260);
- Plaintiffs' Motion to Exclude Expert Testimony of George Edwards (Dkt. No. 270);
- Plaintiffs' Motion to Exclude Expert Testimony of Marc Vanacht (Dkt. No. 273);
- Plaintiffs' Motion to Hold Farmobile, LLC and its Counsel in Contempt for Violation of the Protective Order (Dkt. No. 312);

- Motions in Limine (Dkt. Nos. 343, 345, 347, 350, 353, 356, 358, 359, 363, 365, 367, 370, 373, and 376)

**(D) Witnesses.** All witnesses, including rebuttal witnesses, expected to be called to testify by plaintiff, except those who may be called for impeachment purposes as defined in NECivR 16.2(c) only, are:

*[List names and complete addresses of all persons who will testify in person only. Such list shall identify those witnesses the party expects to be present and those witnesses the party may call if the need arises, and shall also identify, by placing an “(F)” following the name, each witness whose only testimony is intended to establish foundation for an exhibit for which foundation has not been waived.]*

**Plaintiffs will call the following persons to testify and expects them to be present except for the persons as to which it is indicated they will be called by deposition. They will testify in person unless indicated by deposition.**

1. Ron Osborne. c/o Plaintiffs’ counsel. Plaintiffs’ counsel is authorized to accept service of a trial subpoena calling for testimony by Mr. Osborne.
2. Randy Nuss. c/o Defendants’ counsel.
3. Heath Gerlock. c/o Defendants’ counsel.
4. Jason Tatge. c/o Defendants’ counsel. (Will be called by deposition if the witness is not present at trial and is not able to be subpoenaed).
5. Kenny Conklin (By deposition). c/o Defendants’ Counsel.
6. Martin Bures (By Deposition). Address: ThoughtSynth, LLC, 110 W. Quincy Street, #2, Somerville, MA 02144. Phone Number: Represented by Counsel. Jason Armiger, Gesmer Undergrove LLP, 40 Broad Street, Boston, MA 02109. (617) 350-6800.
7. James Christopher Rhodes. (By Deposition). Address: 4205 River Green Parkway,

Duluth, GA 30096. (770) 813-9200. Represented by counsel: Arthur Ebbs, Womble Bond Dickinson LLP, Atlantic Station, 271 17th St., NE, Suite 2400, Atlanta GA 30363. (404) 872-7000.

8. Benjamin Jefferson (By Deposition). 280 Regency Court, Suite 100. Brookfield, WI 53045. (319) 859-3651.

9. Aaron Ault. Address and Phone Number: 3363 E. 550 S., Rochester, IN 46975. (574) 933-3661. (expert witness)

10. Andrew Carter. Address and Phone Number: 200 W. Madison St., 37th Floor, Chicago, IL, 60606. (312) 327-4400. (expert witness)

**Plaintiffs may call the following persons if the need arises, depending upon rulings by the Court on pending motions, including Motions in Limine, and subject to rulings at trial.**

11. Wade Barnes. Address and Phone Number: 25 Rothwell Road, Winnipeg, MB R3P 2M5. 1 (204) 452-3131. Represented by Plaintiffs' Counsel.

12. Sandi Barr. Address and Phone Number: 10012 Grover St., Omaha, NE 68124. (402) 415-1091.

13: Eric Brown. Address: ThoughtSynth, LLC, 110 W. Quincy Street, #2, Somerville, MA 02144. Phone Number: Represented by Counsel: Jason Armiger, Gesmer Undergrove LLP, 40 Broad Street, Boston, MA 02109. (617) 350-6800.

14. Brett Burkhart (By Deposition): 1501 42nd Street Suite 580, West Des Moines, IA 50266. (515) 224-7415.

15. Patrick Crampton. Address and Telephone Number: 25 Rothwell Road, Winnipeg, MB R3P 2M5. 1 (204) 452-3131. Represented by Plaintiffs' Counsel.

16. Clarke Gerlock. c/o Defendants' counsel.

17. Kevin Grant. 4309 8th Avenue N., Lethbridge, AB T1H 6 P3. (403) 942-7007.

Represented by Plaintiffs' counsel.

18. Brad Grier. C/o Plaintiffs' counsel. Plaintiffs' counsel is authorized to accept service of a trial subpoena calling for testimony by Mr. Grier.

19: Perry Howell. 6030 South 58th St., Lincoln, NE 68516. (402) 261-8688.

20. Joe Kafka. Address and Phone Number: 4001 O Street. Lincoln, NE 68510. (888) 657-6496.

21. Antoine Kandra. (By Deposition). Address and Phone Number: 9150 E. Del Camino Dr., # 115, Scottsdale, AZ 85258. (480) 348-9919.

22. Jessi Kingsbury (by deposition if not at trial and not able to be subpoenaed, and listed contingently only to possibly be called if the Court does not sustain the objection to her being listed on Defendants' witness list). Address and Phone Number. c/o Defendants' counsel.

23. Kurt Larson. (By Deposition) Address: 3131 Fernbrook Lane, Suite 100, Plymouth, MN 55447. Phone Number: Represented by counsel: Dawn Van Tassel, Van Tassel Law Firm, 900 IDS Center, 80 South Eighth Street, Minneapolis, MN 55402. (612) 455-4580.

24. Curtis Mackinnon. Address and Telephone Number: 25 Rothwell Road, Winnipeg, MB R3P 2M5. 1 (204) 452-3131. Represented by Plaintiffs' Counsel.

25. Anthony Novero. Address and Phone Number: 8906 N. 52nd Ave., Omaha, NE 68152. (402) 468-4057.

26. Ron Novero. Address and Phone Number: 9494 County Road 36, Fort Calhoun, NE 68023. (402) 468-4057.

27. Geoff Ochsner. c/o Plaintiffs' counsel. Plaintiffs' counsel is authorized to accept

service of a trial subpoena calling for testimony by Mr. Ochsner.

28. Erica Parks. 12829 W. Dodge, Suite 100, Omaha, NE 68154. (402) 391-1065.

29. Ted Pysch a/k/a Ted Price. Address and Phone Number: 14301 FNB Parkway, Omaha, NE. (402) 578-7742.

30. Lori Robidoux. Address and Telephone Number: 25 Rothwell Road, Winnipeg, MB R3P 2M5. 1 (204) 452-3131. Represented by Plaintiffs' Counsel.

31. Scott Schwalbe. (By Deposition) Address: 3131 Fernbrook Lane, Suite 100, Plymouth, MN 55447. Phone Number: Represented by counsel: Dawn Van Tassel, Van Tassel Law Firm, 900 IDS Center, 80 South Eighth Street, Minneapolis, MN 55402. (612) 455-4580.

32. Zach Shefferd. (By Deposition or Live, depending on any ruling by the Court regarding whether the witness is subject to a trial subpoena and thus available at trial). Address and Phone Number: 2922 N. Division Ave., York, NE 68467. (402) 525-7374.

33. Grady White. Address and Telephone Number: 1300 Pennsylvania Avenue, NW Suite 700, Washington, DC 20004 (240) 813-7500. Represented by Defendants' Counsel. (by deposition if not at trial and not able to be subpoenaed, and listed contingently only to possibly be called if the Court does not sustain the objection to him being listed on Defendants' witness list and does not grant Plaintiffs' motion in limine to exclude his testimony).

34. Martin Wodok. (By Deposition). Address and Phone Number: OSB AG, Theresienhohe 30 80339 Munich, Germany. 089/ 23 88 57 500. Represented by counsel: Dominikus Gasteiger, Hans-Fisher-Strasse 12, 80339 Munich, Germany. 089 27 37 14 88.

35. Anita Wortzman. Address and Phone Number: 201 Portage Avenue, 22nd Floor, Winnipeg, Manitoba, R3B 3L3. 1-204-934-2588. Represented by Plaintiffs' counsel.

36. To the extent permitted by the Court, Plaintiffs may call any persons not listed

above who are listed on the Defendants' witness list if the need arises.

Plaintiffs object to Defendants listing Ms. Kingsbury and Mr. White because they have not been disclosed by Defendants in their Initial Disclosures and for the reasons stated more fully in the Motion in Limine relating to Mr. White.

All witnesses expected to be called to testify by Defendants, except those who may be called for impeachment purposes as defined in NECivR 16.2(c) only, are:

1. Jessi Kingsbury. Ms. Kingsbury may be contacted through counsel for Farmobile.
2. Jason Tatge. Mr. Tatge may be contacted through counsel for Farmobile.
3. Heath Gerlock. Heath Gerlock may be contacted through counsel for Farmobile. The undersigned counsel for Mr. Gerlock is authorized to accept service of a subpoena on behalf of Mr. Gerlock.
4. Clarke Gerlock. Clarke Gerlock may be contacted through counsel for Farmobile. The undersigned counsel for Mr. Gerlock is authorized to accept service of a subpoena on behalf of Mr. Gerlock.
5. Bill Gerlock. Mr. Gerlock may be contacted through counsel for Farmobile.
6. Randy Nuss. Mr. Nuss may be contacted through counsel for Farmobile. The undersigned counsel for Mr. Nuss is authorized to accept service of a subpoena on behalf of Mr. Nuss.
7. Grady White. Mr. White may be contacted through counsel for Farmobile.
8. Daniel Mola. Mr. Mola may be contacted through counsel for Farmobile.
9. Brad Sweet. Mr. Sweet may be contacted through counsel for Farmobile.

10. Ted Price, Allies Limited, Inc. CEO. Mr. Price's address and telephone number are:  
Allies Limited, Inc.  
14301 First National Parkway  
Omaha, NE 68154  
Phone number: Not available
11. Geoff Ochsner. Mr. Ochsner may be contacted through counsel for Farmers Edge.
12. Brad Grier. Mr. Grier may be contacted through counsel for Farmers Edge.
13. Frank and Kimberlee Spillers. The Spillers' address and telephone number are:  
1413 Chestnut Street  
Atlantic, IA 50022  
Phone number: (712) 254-1645 (Frank)  
(712) 250-0275 (Kimberlee)
14. Chad Williams. Mr. Williams' address and telephone number are:  
65064 Troublesome Creek Rd.  
Atlantic, IA 50022  
Phone Number: 712-254-3999
15. Perry Howell. Mr. Howell's address and telephone number are:  
Communications Systems Solutions, Inc.  
6030 South 58th Street  
Lincoln, NE 68516  
Telephone number: (402) 261-8688 x201
16. Matthew Walsh (by deposition). Mr. Walsh's address and telephone number were previously provided to Farmers Edge counsel and is believed to be:  
57 Saturday Road  
Mt. Pleasant, SC 29464  
(843) 566-3573
17. Ron Osborne (live and by deposition). Mr. Osborne may be contacted through Farmers Edge counsel.
18. Wade Barnes (live or by deposition). Mr. Barnes may be contacted through Farmers Edge counsel.



19. Sandi Barr, former employee and/or independent contractor of Crop Ventures, Inc. Ms. Barr's address and telephone number are:

10012 Grover St.

Omaha, NE 68124

Phone number: Not available

20. Zach Shefferd (by deposition), former employee and/or independent contractor of Crop Ventures, Inc. Mr. Shefferd's address and telephone number are:

2922 N. Division Ave.

York, NE 68467

Phone number: Not available

21. Ron Novero. Mr. Novero's address and telephone number are:

9494 County Road 36

Fort Calhoun, NE 68023

Phone number: Not available

22. Anthony Novero, former employee and/or independent contractor of Crop Ventures, Inc. Mr. Novero's address and telephone number are:

10516 Bondesson Circle

Omaha, NE 68154

Phone number: Not available

23. Benjamin Jefferson (by deposition). Mr. Jefferson's address and telephone number are:

DISTek Integration, Inc.

280 Regency Court, Suite 100

Brookefield, WI 53045

(319) 859-3651

24. Bill Zimmer. Mr. Zimmer may be contacted through counsel for Farmobile.

25. Scott Schwalbe (by deposition). Mr. Schwalbe's address and telephone number are:

NimbeLink

3131 Fernbrook Lane, Ste. 100

Plymouth, MN 55447  
(507) 208-2877

26. Antoine Kandra (by deposition). Mr. Kandra's address and telephone number are:

9150 E. Del Camino Dr., # 115  
Scottsdale, AZ 85258  
Phone number: Not available

27. Martin Wodok (by deposition). Mr. Wodok's address and telephone number are:

OSB  
Theresienhohe 30  
80339 Muich, Germany  
Phone number: Not available

28. Kevin Grant (live or by deposition). Mr. Grant may be contacted through Farmers Edge counsel.

29. Martin Bures (by deposition). Mr. Bures' address and telephone number are:

110 W. Quincy St., #2  
Somerville, MA 02144  
Phone number: (617) 721.8145

30. Brett Burkhardt (by deposition). Mr. Burkhardt's address and telephone number are:

3128 NW 15th St.  
Ankeny, IA 50023  
Phone number: Not available

31. Chris Rhodes, AGCO (by deposition). Mr. Rhodes' address and telephone number are:

4205 River Green Parkway  
Duluth, GA 30096  
(404) 219-3605

32. Eric Brown (by deposition). Mr. Brown's address and telephone number are:

711 Atlantic Avenue  
Boston, MA 02111  
Phone number: Not available

33. Kurt Larson (by deposition). Mr. Larson's address and telephone number are:

3131 Fernbrook Lane, Ste. 100  
Plymouth, MN 55447  
(507) 208-2877

34. Aaron Ault (live or by deposition). Mr. Ault may be contacted through counsel for Plaintiffs.

35. Anita Wortzman (live or by deposition). Ms. Wortzman's address and telephone number are:

201 Portage Avenue, 22nd Floor  
Winnipeg, Manitoba  
R3B 3L3  
Phone number: Not available

36. Joseph Kafka. Mr. Kafka's address and telephone number are:

4001 O. St.  
Lincoln, NE 68510  
Phone number: Not available

37. Curtis MacKinnon (live or by deposition). Mr. MacKinnon may be contacted through Farmers Edge counsel.

38. Patrick Crampton (live or by deposition). Mr. Crampton may be contacted through Farmers Edge counsel.

39. Lori Robideaux (live or by deposition). Ms. Robideaux may be contacted through Farmers Edge counsel.

Defendants object to Plaintiffs listing Mr. Carter and Mr. Ault as experts, for the reasons stated more fully in their pending Motions to Exclude and Motions in Limine relating to Mr. Carter and Mr. Ault.

It is understood that, except upon a showing of good cause, no witness whose name and address does not appear herein shall be permitted to testify over objection for any purpose except impeachment. A witness whose only testimony is intended to establish foundation for an exhibit for which foundation has not been waived shall not be permitted to testify for any other purpose, over objection, unless such witness has been disclosed pursuant to Federal Rule of Civil Procedure 26(a)(3). A witness appearing on any party's witness list may be called by any other party.

**(E) Expert Witnesses' Qualifications.**

*[Set out the qualifications of each person expected to be called as an expert witness. A curriculum vitae or resume may be attached in lieu of setting out the qualifications.]*

Experts to be called by plaintiff and their qualifications are:

1. Aaron Ault. Address and Phone Number: 3363 E. 550 S., Rochester, IN 46975. (574) 933-3661. CV Attached
- 2 Andrew Carter. Address and Phone Number: 200 W. Madison St., 37th Floor, Chicago, IL, 60606. (312) 327-4400. CV Attached

Experts to be called by defendant and their qualifications are:

1. George Edwards, Ph.D. Dr. Edwards' address and telephone number are:  
Quandry Peak Research  
7958 Beverly Boulevard  
Los Angeles, CA 90048  
Phone number: (323) 545-3933  
CV Attached

2. Krista Holt, President and CEO of GreatBridge Consulting, Inc. Ms. Holt's address and telephone number are:

805 15th St., N.W.

Suite 510

Washington, D.C. 20005

Phone number: 202.289.7620

CV Attached

3. John Martens, Ph.D., MBA, P.E., CFEI, Exponent Engineering and Scientific Consulting. Dr. Marten's address and telephone number are:

Exponent Engineering and Scientific Consulting

525 W. Monroe Street, Suite 1050

Chicago, IL 60661

Phone number: (312) 999-4201

CV Attached

4. Marc Vanacht. Dr. Vanacht's address and telephone number are:

AG Business Consultants

111 West Pine Place

St. Louis, MO 63108

Phone number: (314) 616-3473

CV Attached

Both parties may update their expert witnesses' curriculum vitae and will exchange them with each other.

**(F) Voir Dire.** Counsel have reviewed Federal Rule of Civil Procedure 47(a) and NECivR 47.2(a) and suggest the following with regard to the conduct of juror examination:

*[State any special requests.]*

The parties suggest that the Court conduct initial voir dire to be followed by 45 minutes of voir dire by counsel for Plaintiffs and 45 minutes of voir dire by counsel for Defendants/Counterclaim Defendants/Third-Party Plaintiffs.

The parties disagree regarding how the number of peremptory strikes should be calculated and request a conference with the Court on that issue before jury selection.

**(G) Number of Jurors.** Counsel have reviewed Federal Rule of Civil Procedure 48 and NECivR 48.1 and the Parties agree that this matter should be tried to a jury composed of 8 members. The Parties suggest that two alternates are selected.

**(H) Verdict.** The parties will not stipulate to a less-than-unanimous verdict.

**(I) Briefs, Instructions, and Proposed Findings.** Counsel have reviewed NECivR 39.2(a), 51.1(a), and 52.1, and suggest the following schedule for filing trial briefs, proposed jury instructions, and proposed findings of fact, as applicable:

The parties jointly propose that:

1. Demonstrative exhibits be exchanged on May 11, 2018;
2. No trial briefs be required in this case given the prior briefing of issues and the Court's familiarity with them, the Parties will prepare briefing on any issues requested by the Court;
3. Any proposed findings of fact and conclusions of law be submitted within 14 calendar days after the conclusion of trial; and
4. Proposed jury instructions be submitted on May 14, 2018.

*[State any special requests. Unless otherwise ordered, trial briefs, proposed jury instructions, and proposed findings of fact shall be filed five (5) working days before the first day of trial.]*

**(J) Length of Trial.** Counsel estimate the length of trial will consume not less than ten day(s), not more than fifteen day(s), and probably about 14 day(s).

**(K) Trial Date.** Trial is set for May 21, 2018.

*Counsel for Plaintiffs/Counterclaim Defendants  
And Third-Party Defendants:*

s/Patrick E. Brookhouser, Jr. \_\_\_\_\_  
Patrick E. Brookhouser, Jr. #19245  
Luke C. Holst #23834  
Matthew G. Munro #26190  
McGrath North Mullin & Kratz, PC LLO  
First National Tower, Suite 3700  
1601 Dodge Street  
Omaha, Nebraska 68102  
(402) 341-3070  
(402) 341-0216 fax  
pbrookhouser@mcgrathnorth.com  
lholst@mcgrathnorth.com  
mmunro@mcgrathnorth.com

*Counsel for Defendants/Counterclaim Plaintiffs  
And Third-Party Plaintiff:*

s/Marnie A. Jensen \_\_\_\_\_  
Marnie A. Jensen - #22380  
Kamron T.M. Hasan - #25494  
Ryann A. Glenn - #26160  
HUSCH BLACKWELL LLP  
13330 California Street, Suite 200  
Omaha, NE 68154  
(402) 964-5000 Telephone  
(402) 964-5050 Facsimile  
Marnie.Jensen@huschblackwell.com  
Kamron.Hasan@huschblackwell.com  
Ryann.Glenn@huschblackwell.com

and

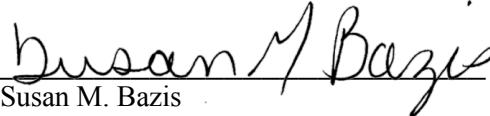
Joan Archer – MO #44070  
(admitted pro hac vice)  
Farmobile, LLC

4001 W. 114th Street, Suite 300  
Leawood, KS 66211  
joanlit@farmobile.com

and

Sierra Faler-MO #70050  
(admitted *pro hac vice*)  
HUSCH BLACKWELL LLP  
4801 Main Street, Suite 1000  
Kansas City, MO 64112-2551  
Direct: 816.983.8261  
Fax: 816.983.8080  
Sierra.Faler@huschblackwell.com

BY THE COURT:

  
Susan M. Bazis  
United States Magistrate Judge



## Aaron Ault Curriculum Vitae

### Contact Information

Aaron Ault  
3363 E 550 S  
Rochester, IN 46975  
(574)933-3661  
[aultac@gmail.com](mailto:aultac@gmail.com)

### Education

Purdue University, West Lafayette, IN      Elect.&Comp. Engineering    MS, 2005  
-      graduate specialization in wireless networking and signal processing

Purdue University, West Lafayette, IN      Elect.&Comp. Engineering    BSCpE, 2003

### Appointments:

|         |                              |                                     |              |
|---------|------------------------------|-------------------------------------|--------------|
| 2014 -  | Senior Research Engr.        | School of Elect. & Comp. Engr.      | Purdue Univ. |
| 2014 -  | Co-Founder and CTO           | The Qlever Company, LLC             |              |
| 2005-14 | Research & Facilities Coord. | Cent. for Wireless Sysys. and Apps. | Purdue Univ. |
| 1999 -  | Vice President               | Ault Farms, Inc.                    |              |

### Areas of Expertise

*Cloud Technologies:* Mr. Ault is the founding project lead for the launch of an industry and academic partnership for the creation of an open source cloud-to-cloud API to enable interoperability of farmer-industry-university cloud data systems to improve the uses of data in agriculture. One relevant project of interest involved using OADA to communicate real-time telematics information from a combine to the cloud for real-time display on a mobile device: <http://openag.io/oada-api-empowers-case-ih-geosys-and-farmer-aaron/>.

*Telematics:* Mr. Ault was the founding project lead for the ISOBlue open source telematics project, started in March of 2013 and published at <http://isoblue.org>. ISOBlue has since had 3 revisions and is currently actively used within the Open Ag Technology and Systems group for collection of CAN and ISOBUS data and its transmission to the cloud in real-time.

*Professional Agriculture:* Mr. Ault is an active beef and grain farmer in the midwestern United States as vice president of Ault Farms, Inc., raising approximately 3,200 acres of corn, soybeans, and wheat, and 3,000 head of beef cattle. This provides a unique perspective that combines grassroots on-the-ground experience farming with complex computing architectures and concepts that helps inform practical considerations for system-level designs.

Advocate for Data Use in Agriculture: Mr. Ault has been an invited professional speaker on data use in agriculture at many events both domestically and internationally, and is widely recognized as a leading domain expert both technically and experientially.

Mobile Applications: Mr. Ault is a co-investigator on USDA-funded projects titled “Improving agricultural management with autogenic mobile technology” and “Mobile computing technologies to enable more efficient water management decisions in the field”. These projects have led to several apps on the GooglePlay store with all code offered open-source through GitHub; these apps involve synchronization via cloud data storage and interfacing with public data sources

## **Publications**

1. Scalable, Distributed, Automatic, Privacy-Preserving Data Sharing: The Open Ag Data Alliance open source project. Codebase: <https://github.com/oada>. Homepage: <https://openag.io>. Research group webpage: <https://engineering.purdue.edu/oatsgroup/>
2. Open Source Machine Data Collection: A. Layton, A. Balmos, S. Sabpisa, A. Ault, J. Krogmeier, D. Buckmaster. “ISOBlue: An Open Source Project to Bring Agricultural Machinery Data into the Cloud,” in ASABE Annual International Meeting, Montreal, QC (July 2014)
3. Open Source Telematics: The ISOBlue open source project. Codebase: <https://github.com/isoblue>. Homepage: <https://isoblue.org>. Mailing list: <https://groups.google.com/forum/#!forum/isoblue>
4. Highly Scalable Geospatial Data Visualization and Real-Time Statistics Computation for Mobile Devices: The TrialsTracker open source web application. Codebase: <https://github.com/OpenATK/TrialsTracker>. Live demo: <https://trialstracker.oada-dev.com>
5. Open Source Data Model Publication and Visualization: The Open Ag Data Alliance formats projects. Currently include convergent replicated data type (CRDT)-style graph data models for field sensor data, geospatially-indexed data such as crop yield and moisture, and fresh produce food safety audits. Codebase: <https://github.com/oada/oada-formats>. Homepage: <https://oada-formats.github.io>
6. Architecture for Streaming Field Data: A. Layton, A. D. Balmos, A. Ault, J. Krogmeier, and D. Buckmaster, “Real-Time Cellular Streaming of ISOBUS Data: Network Considerations and Prototype Design,” in ASABE Annual International Meeting, paper number 152189113, New Orleans, LA (July 2015)
7. Data-Centric Farm Management: A. Ault, J. Krogmeier, D. Buckmaster. “Mobile, Cloud-Based Farm Management: A Case Study with Trello on My Farm,” in ASABE Annual International Meeting, Kansas City, MO (July 2013).

8. *Distributed Interfaces for Logistics*: J. Welte, A. Ault, C. Bowman, S. Ellis, D. Buckmaster, D. Ess, J. Krogmeier. "An Approach to Farm Management Information Systems Using Task-Specific, Collaborative Mobile Apps and Cloud Storage Services," in ASABE Annual International Meeting, Kansas City, MO (July 2013).
9. *Error Estimation*: A. Balmos, A. Layton, A. Ault, J. Krogmeier, D. Buckmaster. "Toward Understanding the Errors in Online Air-Ride Suspension Based Weight Estimation," in ASABE Annual International Meeting, Montreal, QC (July 2014)
10. *Embedded Encryption*: Ault, Aaron C., Saurabh Bagchi, and Shammi R. Didla. Communication Encryption Method and Device. Purdue Research Foundation, assignee. Patent US8767957 B1. 1 July 2014.
11. *Real-Time Wireless Video Systems*: J. Fawcett, B. Beyer, D. Hum, A. Ault, J. Krogmeier, C. Taskiran. "Rich Immersive Sports Experience: A Hybrid Multimedia System for Content Consumption." Sixth Annual IEEE Consumer Communications and Networking Conference, Las Vegas, NV, pages 1016-1020, January 2009.
12. *Watershed Management*: S. Noel, A. Ault, D. Buckmaster, I. Chaubey, B. Engel, J. Frankenburger, J. Krogmeier, D. Flanagan. "Watershed Delineation in the Field: A New Approach for Mobile Applications Using LiDAR Elevation Data," in ASABE Annual International Meeting, Kansas City, MO (July 2013).
13. *Sensor Networks in Agriculture*: A. Balmos, A. Layton, A. Ault, J. V. Krogmeier, and D. Buckmaster. "Investigation of Bluetooth Communications for Low-Power Embedded Sensor Networks in Agriculture," in ASABE Annual International Meeting, Kansas City, MO (July 2013).
14. *Wireless sensors*: A. Layton, A. Balmos, D. Hancock, A. Ault, J. Krogmeier, D. Buckmaster. "Wireless Load Weight Monitoring Via a Mobile Device Based on Air Suspension Pressure." 2012 American Society of Agricultural and Biological Engineers Annual International Meeting. Dallas, Texas. July 2012.
15. *Mobile video streaming*: A. Ault, J. Krogmeier, S. Dunlop, E. Coyle. "eStadium: The Mobile Wireless Football Experience." Third International Conference on Internet and Web Applications and Services, Athens, Greece, pages 644-649, June 2008.
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17. *Embedded encryption*: S. Didla, A. Ault, and S. Bagchi. "Optimizing AES for Embedded Devices and Wireless Sensor Networks." Fourth International Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities (TRIDENTCOM). Innsbruck, Austria. March 2008.

## **Supplemental Information since January 2018**

### **Article:**

A. Ault, J. Krogmeier, D. Buckmaster. "Why Ag's Future Belongs to Open Source." ASABE Resource Magazine. March/April 2018. pp 7-9.

### **Talks:**

"Scalable Architecture for Ag Data Interoperability." Purdue Digital Ag Day, March 2, 2018. [https://www.youtube.com/watch?v=xIjY6yqDwUk&t=0s&list=PLGwgTarsp82QWhVCs\\_mmpdC2gpq7M0Qgs&index=8](https://www.youtube.com/watch?v=xIjY6yqDwUk&t=0s&list=PLGwgTarsp82QWhVCs_mmpdC2gpq7M0Qgs&index=8)

"Architecture for Interoperable Data Exchange." OATS Center Launch, March 23, 2018.

"Open Source in Ag." OATS Center Launch, March 23, 2018.

### **Open Source Code:**

<https://github.com/aultfarms>.



OCEAN TOMO  
INTELLECTUAL CAPITAL EQUITY

## ANDREW W. CARTER CURRICULUM VITAE

October 25, 2017

**Andrew W. Carter** is one of the founding partners, Chief Operating Officer, and head of the Expert Testimony practice of Ocean Tomo, the leading Intellectual Capital Merchant Banc® firm. The company provides services related to Intellectual Property expert testimony, valuation, investments, risk management and transactions. Ocean Tomo assists clients – corporations, law firms, governments and institutional investors – in realizing Intellectual Capital Equity® value broadly defined.

Mr. Carter's efforts at Ocean Tomo are concentrated in the areas of intellectual property damages expert witness testimony, licensing, valuation, and investment. Mr. Carter has testified in excess of 80 times. His testimony in court covers some of the most popular patent infringement forums in the country, including ND California, Delaware, ED Texas, SD New York, New Jersey, WD Wisconsin, and MD Florida. He has also provided testimony at the International Trade Commission and in Canadian Federal Court.

Prior to Ocean Tomo, Mr. Carter was one of the founders of the Duff & Phelps Capital Partners Sale/License-Back Fund. The Fund was formed to acquire, pool, and license patent portfolios in critical technology areas. Prior to the Fund, Mr. Carter was a partner at the largest U.S. consulting firm focusing on the economic, strategic, and licensing issues related to intellectual property.

Mr. Carter contributes to the intellectual property community outside of Ocean Tomo as well. For several years he was an Adjunct Professor at the Illinois Institute of Technology, teaching a masters-level course on the management of intellectual property. He is also an inventor, having filed several patent applications, and co-inventing patents 7,716,076, 8,355,932, and 8,694,419.

Mr. Carter's clients cover a wide variety of industries, including telecommunications, internet services, electronics, industrial products and processes, software, consumer products, pharmaceuticals, medical devices, financial services, securities, casinos/gaming, and entertainment. He is a frequent speaker on the financial, accounting, business, and legal issues related to intellectual property.

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**EDUCATION**

University of Chicago, Graduate School of Business, M.B.A.  
with concentrations in Policy Studies and Statistics.  
Graduated with High Honors.

Rose-Hulman Institute of Technology, B.S. in Chemical Engineering  
with a minor in Economics.

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**PROFESSIONAL  
CERTIFICATIONS**

Certified Public Accountant, State of Illinois, August 9, 1996.  
Certificate No. 67,784.

Licensed Public Accountant, State of Illinois. License No. 0065-025347.

Registered Public Accountant Continuing Professional Education Sponsor  
(State of Illinois). License No. 158-001945.

Arbitrator, American Arbitration Association, 2003.

Certified Licensing Professional. Certification No. 1470.

Certified in Financial Forensics. Certification No. 251.

Chartered Global Management Accountant. Certification No. 110050176.

FINRA Series 7 License and Series 63 License holder.

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**EXPERIENCE**

Co-Founder and Managing Director, Ocean Tomo, 2003 to present.

Adjunct Professor, Illinois Institute of Technology, Masters-Level Program, 2011-  
2015.

Principal, Duff & Phelps Capital Partners S/LB Fund, 2002 to 2003.

Managing Director, Principal, Associate, and Staff Consultant, InteCap, Inc.  
(formerly IPC Group), 1993 to 2002.

Special Chemical Risk Coordinator, Loss Prevention Specialist, and Loss  
Prevention Coordinator, Factory Mutual Engineering, 1988 to 1993.

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**MEMBERSHIPS**

American Arbitration Association (2002 - 2005)  
American Bar Association, Associate Member (1999 - present)  
American Economic Association (1997 - 2002)  
American Institute of Certified Public Accountants (1996 - present)  
American Institute of Chemical Engineers (1993 - present)  
American Statistical Association (1996 - 2002)  
Illinois CPA Society (1996 - present)  
Intellectual Property Owners Association (2001 - 2002)  
Licensing Executives Society (1995 - present)  
- Valuation & Taxation Committee Chair (2001 - 2002)  
Board of Editors, Patent Strategy & Management (2004-2009)

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**PUBLICATIONS**

“Rite-Hite Corporation v. Kelley Company, Inc. Case Summary.” *Licensing Economics Review*, Summer, 1995, With Lewis M. Koppel.

“Rite-Hite Corporation v. Kelley Company, Inc. Case Summary.” *Intellectual Property Infringement Damages*, Cumulative Supplement, 1996, With Lewis M. Koppel.

“Monetary Awards for Trademark Infringement Damages Under the Lanham Act.” *The Trademark Reporter*, July-August, 1996, With Gregory M. Remec.

“Financial Accounting and Reporting Considerations, Supplementary Material.” *The New Role of Intellectual Property in Commercial Transactions*, Cumulative Supplement, 1997, With Michael J. Lasinski.

“Financial Accounting and Reporting Considerations.” *Intellectual Property in the Global Marketplace, Volume 1, Valuation, Protection, Exploitation, and Electronic Commerce*, 2nd Edition, Melvin Simensky, Lanning Bryer and Neil J. Wilkof, September 1999, With Michael J. Lasinski.

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“Generating Cash from a Patent Portfolio.” *Patent Strategy & Management*, Vol. 5, No. 4, August, 2004, With Fayth A. Bloomer.

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“Patent Cross-Licenses: A Financial Asset Hedge.” *Patent Strategy & Management*, Vol. 5, No. 7, November, 2004, With Robert J. Block and Fayth A. Bloomer.

**PUBLICATIONS**  
**Continued...**

“Intellectual Capital Value at Risk.” *Patent Strategy & Management*, Vol. 5, No. 8, December, 2004, With Robert J. Block and Fayth A. Bloomer.

“Patent Strategy Questions Raised By the eBay Decision.” *Patent Strategy & Management*, Vol. 7, No. 6, November, 2006, With Adam T. Clifford.

“Who Cares About Japan?” *Patent Strategy & Management*, Vol. 8, No. 2, July 2007, With Suzue Fujimori and Mark Rollins.

“Who Cares About Japan? Part Two.” *Patent Strategy & Management*, Vol. 8, No. 3, August, 2007, With Suzue Fujimori and Mark Rollins.

“Who Cares About Japan? Part Three.” i, Vol. 8, No. 9, February 2008, With Suzue Fujimori and Mark Rollins.

“No Collapse in the Market for Ideas.” featured in “A Flight to Quality” *LAM Magazine*, January/February 2009, by Nigel Page.

“Back to IP Basics With Green Energy Licensing.” Featured in *Law360*, January 9, 2009, With Trevor Blum.

“Patent Licensing After ResQNet: Has the Federal Circuit Changed the Game?” Featured in *LES Insights*, April 2011, With Cate Elsten.

“Apportionment in Reasonable Royalty Damages”, ABA 30th Intellectual Property Law Conference, March 2015. With Justin Lewis and Alexander Clemons.

“Where Do We Stand One Year After Alice?” Featured in *Law360, Voices of the Bar* series, June 17, 2015.

“With High Court Mum On Java Copyrights, Is Innovation Safe?” Featured in *Law360, Voices of the Bar* series, July 1, 2015.

“Do The Proposed AIA Rule Changes Go Far Enough?” Featured in *Law360, Voices of the Bar*, August 29, 2015.



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**TESTIMONY  
HISTORY**

Procter & Gamble v. Conopco, Inc., Unilever United States, Inc., Lever Brothers Company, Helene Curtis Industries, Inc., and Helene Curtis, Inc.  
Civil Action No. 98-767-A, filed 6/2/1998  
United States District Court, Eastern District of Virginia  
Deposition Testimony

Forensic Technology WAI, Inc., v. Mnemonic Systems, Inc.  
Civil Action No. 98-924-A, filed 7/1/1998  
United States District Court, Eastern District of Virginia  
Deposition Testimony

Sandra Solomon v. Kimberly-Clark Corporation  
Civil Action No. CIV 96-2000 PHX RCB, filed 8/30/1996  
United States District Court, District of Arizona  
Deposition Testimony

Surgical Acuity, Inc. v. General Scientific Corp.  
Civil Action No. 98-C-0457-S filed, 7/1/1998  
United States District Court, Western District of Wisconsin  
Trial Testimony

Concord Camera Corp., v. Fuji Photo Film Co., Ltd.  
Civil Action No. 97 Civ. 9534 (DC), filed 12/30/1997  
United States District Court, Southern District of New York  
Deposition Testimony

Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc., et al.  
Civil Action No. 2:99cv712, filed 5/13/1999  
United States District Court, Eastern District of Virginia  
Deposition Testimony

Creative Products, Inc. of Rossville v. Follmer Development, Inc. and Americana Marketing, Inc.  
Case No. 95-2246, filed 10/3/1995  
United States District Court, Central District of Illinois  
Deposition Testimony

Fuji Photo Film Co., Ltd. v. Jazz Photo Corp., Jazz Photo Hong Kong Ltd. and Jack Benun  
Civil Case No. 99-2937, (NHP) filed 6/23/1999  
United States District Court, District of New Jersey  
Deposition and Trial Testimony

Mattel, Inc. v. Giochi Preziosi S.p.A et al.  
Case No. 99-02258 VAP (RNBx), filed 3/2/1999  
United States District Court, Central District of California  
Deposition Testimony

**TESTIMONY  
HISTORY  
Continued...**

Nicholas V. Perricone, M.D. v. Medicis Pharmaceutical Corp.  
Case No. 3:99CV 1820, filed 9/15/1999  
United States District Court, District of Connecticut  
Deposition Testimony

In re: AI Realty Marketing of New York, Inc., Laser Acquisition Corp. DDG I,  
Inc., Sunbeam Americas Holdings, Ltd., at al., Debtors.  
Sunbeam Products, Inc. v. Wing Shing Products (BVI) Ltd.  
Case No. 01-40252 (AJG) through 01-40290 (AJG), Adv. Pro. No. 01-2439 (AJG),  
filed 2/6/2001  
United States Bankruptcy Court, Southern District of New York  
Deposition and Trial Testimony

CytoLogix Corporation v. Ventana Medical Systems, Inc.  
Civil Action Nos. 00-12231-REK, filed 10/27/2000 and 01-10178-REK, filed  
01/30/2001  
United States District Court, District of Massachusetts  
Deposition Testimony

In the matter of Certain Lens-Fitted Film Packages (United States International  
Trade Commission)  
Investigation No. 337-TA-406, filed 3/25/1998  
United States International Trade Commission  
Deposition and Trial Testimony

Turn-Key-Tech, LLC v. Fuji Photo Film USA and Fuji Photo Film, Ltd.  
Case No. 01CV1490 L, filed 8/17/2001  
United States District Court, Southern District of California  
Deposition Testimony

GE-Harris Railway Electronics, LLC, et al, v. Westinghouse Air Brake Company  
Case No. 99-070 GMS, filed 2/12/1999  
United States District Court, District of Delaware  
Trial Testimony

Planet Bingo, LLC v. Gametech International, Inc. v. Gary Weingardt  
Case No. CV-S-01-1295-JCM(PAL), filed 11/2/2001  
United States District Court, District of Nevada  
Deposition Testimony

U.S. Philips Corporation v. Infodisc Technology USA, Inc., and Goodtimes  
Entertainment LLC  
Case No. CV 04-10017 SWV (RZx), filed 12/8/2004  
United States District Court, Central District of California  
Deposition Testimony

Nissim Corp. v. Clearplay, Inc., Matthew Jarman, Lee Jarman, and William Aho  
Case No. 04-21140-Civ-Huck/Turnoff, filed 5/13/2004  
United States District Court, Southern District of Florida  
Deposition Testimony

**TESTIMONY  
HISTORY  
Continued...**

Fuji Photo Film Co., Ltd. v. Jack C. Benun, Ribit Tech Products LLC, Polytech Enterprises Ltd, and Polytech (Shenzhen) Camera Co. Ltd  
Case No. 2-05-CV-1863(KSH), filed 4/18/2005  
United States District Court, District of New Jersey  
Deposition and Trial Testimony

Network -1 Security Solutions, Inc., v. D-Link Corporation and D-Link Systems, Inc.  
Civil Action No. 6:05-cv-00291-LED, filed 8/10/2005  
United States District Court, for the Eastern District of Texas  
Deposition Testimony

Fuji Photo Film Co., Ltd. v. Achiever Industries Ltd., Achiever Group Ltd., Yet Chan, DC Tech Industry Corp., Cindy Yang, Ferrania USA, Inc., Ferrania Technologies, S.p.A., Nortek Ltd., DCS Technology Ltd., Nortek Group Ltd., and Achiever USA Corp.  
Case No. CV 05-08044 JFW, filed 11/10/2005  
United States District Court, Central District of California  
Deposition Testimony

Omega Patents, L.L.C. v. Fortin Auto Radio, Inc. and Directed Electronics, Inc.  
Case No. 6:05-cv-01113-ACC-DAB, filed 7/29/2005  
United States District Court, Middle District of Florida – Orlando Division  
Deposition and Trial Testimony

Crown Packaging Technology, Inc. and Crown Cork & Seal USA, Inc. v. Ball Metal Beverage Container Corporation  
Case No. 3:05-cv-0281 (WHR), filed 8/18/2005  
United States District Court, Southern District of Ohio – Western Division  
Deposition Testimony

Michael E. Argent v. Permalok Corporation, P-L International Inc., Richard Bauman, Joseph Rolnicki, and Thompson Coburn LLP  
Case No. 042-09077, filed 11/23/2004  
United States District Court, Circuit Court of Missouri- St. Louis County  
Deposition Testimony

Minka Lighting, Inc. v. Maxim Lighting International, Inc., Maxim Lighting, Inc., and Maxim Group Companies.  
Case No. 3-06CV0995-K, filed 6/6/2006  
United States District Court, Northern District of Texas-Dallas Division  
Deposition Testimony

Emcore Corporation v. Optium Corporation.  
Case No. 2:06-CV-01202, filed 9/11/2006  
United States District Court, Western District of Pennsylvania.  
Deposition Testimony

Interface, Inc., et al., v. Mohawk Industries, Inc., et al.  
Case no. 4:05-CV-0190-HLM, filed 6/21/2005  
United States District Court, Northern District of Georgia  
Deposition Testimony

**TESTIMONY  
HISTORY  
Continued...**

Solvay, S.A., v. Honeywell International Inc.  
Case No. 06-557-SLR, filed 9/7/2006  
United States District Court, District of Delaware  
Deposition and Trial Testimony

Gemtron Corporation v. Saint-Gobain Corporation  
Case No. 04-CV-0387, filed 6/10/2004  
United States District Court, Western District of Michigan Southern Division  
Deposition Testimony

Harris Corporation v. Federal Express Corporation  
Case No. 6:07 – CV-1819-ORL-28 KRS, filed 11/16/2007  
United States District Court, Middle District of Florida, Orlando  
Division  
Deposition Testimony

Quickie, LLC. v. Greenberg Traurig, LLP, Thelen  
Reid Brown Raysmand & Steiner LLP  
(f/k/a Thelen, Reid, Priest LLP) and Robert E. Krebs  
Case No. 07 Civ. 10331 (RMB) (DFE), filed 11/14/2007  
United States District Court, Southern District New York  
Deposition Testimony

The Spoilage Cutter Company Incorporated d/b/a Martor USA v. World Kitchen,  
LLC  
Case No. 08-CV-01263, filed 3/3/2008  
United States District Court, Northern District of Illinois  
Deposition Testimony

Emcore Corporation and JDSU Corporation v. Optium Corporation  
Case No. 2:07-cv-0326, filed 3/14/2007  
United States District Court, Western District of Pennsylvania  
Deposition and Trial Testimony

Saint Gobain Autover USA, Inc., et al v. Xinyi Glass North America, Inc. et al.  
Case No. 1:06 CV 2781, filed 11/16/2006  
United States District Court, Northern District of Ohio Eastern Division  
Deposition and Trial Testimony

V. Mane Fils S.A. v. International Flavors & Fragrances Inc.  
Case No. 06-02304 (FLW), filed 5/18/2006  
United States District Court of New Jersey  
Deposition Testimony

Beneficial Innovations, Inc. v. Blockdot, Inc., et al  
Case No. 2:07-CV-263-TJW-CE, filed 6/20/2007  
United States District Court, Eastern District of Texas  
Deposition Testimony

**TESTIMONY  
HISTORY  
Continued...**

Beneficial Innovations, Inc. v. AOL, LLC, et al  
Case No. 2:07-CV-555-TJW-CE, filed 12/20/2007  
United States District Court, Eastern District of Texas  
Deposition Testimony

Advanced Cartridge Technologies, LLC v. Lexmark International, Inc.  
Case No: 8:10-cv-00486-SDM-TGQ, filed 2/22/2010  
United States District Court, Middle District of Florida, Tampa Division  
Deposition Testimony

SkyHawke Technologies, LLC. v. GPS Industries, LLC., et al.  
Case No. 08-21496-CIV (Moreno/Brown), filed 5/23/2008  
United States District Court, Southern District of Florida  
Deposition Testimony

Geo Foundation, Ltd. v. Technical Consumer Products, Inc.  
Case No. 50 133 T 00790 10, filed 12/8/2010  
International Centre For Dispute Resolution, American Arbitration Association  
Deposition and Arbitration Testimony  
Medisim Ltd. v BestMed, LLC  
Case No. 10-CV-02463-SAS, filed 3/17/2010  
United States District Court, Southern District of New York  
Trial Testimony

Corelogic Information Solutions, Inc. v. Fiserv, Inc. et al  
Case No 2:10-cv-132-TJW, filed 4/16/2010  
United States District Court, Eastern District of Texas (Marshall Division)  
Deposition and Trial Testimony

Magna Mirrors of America, Inc. v. 3M Company, Inc.  
Case No. 2:07-cv-10688, filed 2/15/2007  
United States District Court, Eastern District of Michigan (Southern Division)  
Deposition Testimony

Responsive Innovations, LLC and Turning Technologies, LLC et al. v Holtzbrinck  
Publishers, LLC and MacMillian Publishers, Inc. et al.  
Case No. 4:08-cv-01184-PCE, filed 5/13/2008  
United States District Court, Northern District of Ohio (Eastern Division)  
Deposition Testimony

Interface, Inc.; Interface Americas, Inc.; InterfaceFLOR LLC; and FLOR, Inc. v  
Tandus Flooring, Inc. and Tandus Flooring US, LLC.  
Civil Action File No. 4:13-cv-00046-WSD, filed 2/26/2013  
United States District Court, Northern District of Georgia (Rome Division)  
Deposition Testimony

comScore, Inc. v Moat, Inc.  
Case No 2:12CV695-HCM/DEM, filed 7/20/2012  
United States District Court, Eastern District of Virginia (Norfolk Division)  
Deposition Testimony

**TESTIMONY  
HISTORY  
Continued...**

Advanced Fiber Technologies (AFT) v. J & L fiber Services, Inc.  
Case No. 1:07 CV-01191-LEK – DRH, filed 11/9/2007  
United States District Court, Northern District of New York  
Deposition Testimony

In the matter of Silicon Microphone Packages and Products Containing the Same  
(United States International Trade Commission)  
Investigation No. 337-TA-888, filed 6/21/2013  
Deposition and Trial Testimony

Roy-G-Biv Corporation v. ABB Ltd., ABB Inc., MeadWestvaco Texas, LP, and  
MeadWestvaco Corp.  
Case No. 6:11-cv-00622-LED, filed 11/15/2011  
United States District Court, Eastern District of Texas (Tyler Division)  
Deposition Testimony

Robertson Transformer Co. d/b/a Robertson Worldwide v. General Electric  
Company, GE Lighting LLC, H.B. Etlin Company, Ltd. a/k/a Etlin-Daniels, ARN  
Industries, Inc. d/b/a Halco Lighting Technologies, Hatch Transformers, Inc.,  
Howard Industries Inc., and Keystone Technologies, LLC, and Super X  
Manufacturing Ltd. (Intervenor).  
Case No. 1:12-cv-080904, filed 10/10/2012  
United States District Court, Northern District of Illinois, Eastern Division  
Deposition Testimony

In Re: Arbitration of Garmin International, Inc. v PhatRat Technology, LLC  
JAMS Case No. 1240021597, filed 1/8/2014  
Deposition and Arbitration Testimony

Malibu Boats, LLC v Nautique Boat Company, Inc.  
Case No. 3:13-cv-00656, filed 10/31/2013  
United States District Court, Eastern District of Tennessee  
Deposition Testimony

Quest Integrity USA, LLC v A. Hak Industrial Services US, LLC  
Case No. 2:14-cv-01971-RAJ, filed 12/29/2014  
United States District Court, Western District of Washington at Seattle  
Deposition Testimony

Quest Integrity USA, LLC v Cokebusters USA Inc.  
Case No. 1:14-cv-01483-SLR, filed 12/15/2014  
United States District Court, District of Delaware  
Deposition Testimony

Quest Integrity USA, LLC v Clean Harbors Industrial Services, Inc.  
Case No. 1:14-cv-01482-SLR, filed 12/15/2014  
United States District Court, District of Delaware  
Deposition Testimony

**TESTIMONY  
HISTORY**  
Continued...

Bombardier Recreational Products Inc. and Arctic Cat, Inc. and Arctic Cat Sales, Inc.  
Court File No. T-2025-11, filed 12/15/2011  
Federal Court of Canada, Montreal, Quebec  
Trial Testimony

L-3 Communications Holdings, Inc. and Premier Utility Services, LLC v Patents of Power Survey, LLC  
Cases IPR2014-00274, IPR2014-0085, and IPR00864 filed 5/30/2014  
Patent Trial and Appeal Board  
Deposition Testimony

Gilead Sciences, Inc. v Merck & Co., Inc., Merck Sharp & Dohme Corp., and ISIS Pharmaceuticals, Inc.  
Case No. 5:13-4057-BLF, filed 8/30/2013  
United States District Court, Northern District of California, San Jose Division.  
Deposition and Trial Testimony

Knapp Logistics & Automation, Inc. v R/X Automation Solutions, Inc.  
Civil Action No. 14-cv-00319-RBJ, filed 2/4/2014  
United States District Court, District of Colorado  
Trial Testimony

Viva Healthcare Packaging LTD., Viva Healthcare Packaging (HK) LTD., and Viva Healthcare Packaging (USA) Inc. v CTL Packaging USA, Inc. and Tuboplast Hispania  
Case No. 3:313-CV00569-MOC-DSC, filed 10/10/2013  
United States District Court, Western District of North Carolina  
Deposition Testimony

Arctic Cat, Inc. and Arctic Cat Sales, Inc. and Bombardier Recreational Products Inc.  
Court File No. T-1353-13, filed 8/9/2013  
Federal Court of Canada, Ottawa, Ontario  
Trial Testimony

Realtime Data LLC d/b/a IXO, v Riverbed Technology, Inc. and Dell, Inc.  
Case No. 6:15-CV-463-RWS-JDL, filed 5/8/2015  
United States District Court, Eastern District of Texas  
Hearing Testimony

Idenix Pharmaceuticals Inc. et al, v Gilead Sciences Inc. and Gilead Pharmasset LLC  
Case No. 13-1987-LPS and Case No. 14-846-LPS, filed 12/1/2013  
United States District Court, District of Delaware  
Deposition and Trial Testimony

Malibu Boats, LLC, v Mastercraft Boat Company, LLC.  
Case No. 3:15-CV-276-TAV-HBG, filed 6/29/2015  
United States District Court, Eastern District of Tennessee  
Deposition Testimony

**TESTIMONY  
HISTORY**  
Continued...

Geodynamics Inc. v DynaEnergetics US, Inc., Anderson Perforating Services, LLC, and Tong Petrotech, Inc.  
Civil Action No. 2:15-cv-01546-RSP, filed 9/22/2015  
United States District Court, Eastern District of Texas  
Trial Testimony

Realtime Data, LLC D/B/A IXO, v. Riverbed Technology, Inc., and Dell, Inc.  
Case No. 6:15-CV-463-RWS-JDL, filed 5/8/2015  
United States District Court, Eastern District of Texas  
Deposition Testimony and Trial Testimony



# GEORGE EDWARDS

## Computer Scientist

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## Lecturer of Computer Science

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## EDUCATION

- **Ph.D. in Computer Science**, *University of Southern California* **Aug 2010**
- **M.S. in Computer Science**, *University of Southern California* **May 2006**
- **B.S. in Computer Science** with Minor in Mathematics, *Vanderbilt University* **Aug 2003**

## EMPLOYMENT

- **Computer Scientist** **June 2012 – Present**  
*Quandary Peak Research, Los Angeles, CA*
  - Providing software analysis and expert witness testimony in software-related litigation, including patent and copyright infringement, theft of trade secrets, breach-of-contract, and other matters.
  - Analyzing software intellectual property and patent portfolios for validity and infringement in the context of licensing and brokering negotiations, startup investments, and M&A.
  - Investigating software failures to determine the root cause and help clients understand whether and how the failure could have been avoided.
  - Applying advanced analytic techniques based on calibrated parametric models for valuation of software products and estimation of software development costs.
  - Documenting the architecture of software systems to identify structural similarities and differences among competing products and services and deduce the origin of software designs and code.
- **Lecturer of Computer Science** **Jan 2012 – Present**  
*Computer Science Department, University of Southern California, Los Angeles, CA*
  - Teaching a graduate-level software engineering course for M.S. and Ph.D. students and practicing software and aerospace engineers (CSCI 568).
  - Previously taught an undergraduate-level course on programming fundamentals, algorithms, and data structures (CSCI 102).
- **Co-Founder and CEO** **Aug 2010 – June 2012**  
*Blue Cell Software, Los Angeles, CA*
  - Led and managed the development of a next-generation modeling and analysis platform for complex software-intensive systems.
  - Developed advanced model-based algorithms for reliability, efficiency, and risk analysis.
  - Conceived and implemented the business development strategy and produced and presented investment proposals.

- **Post-Doctoral Researcher** **Feb 2011 – Sept 2011**  
*Center for Systems and Software Engineering, University of Southern California, Los Angeles, CA*

  - Conducted research on enterprise integration mechanisms to support net-centric operations.
  - Investigated methods, processes, and tools for decomposition and refinement of SoS capability needs into detailed requirements and integration architectures for an NSA-funded research project.
  - Designed key components of PATFrame, a decision support system for planning test events of networks of unmanned and autonomous vehicles.
  - Applied lessons learned from large-scale corporate mergers, including the HP-Compaq merger, to software and systems integration challenges faced by the DoD and NSA.
  
- **Graduate Fellow** **Aug 2004 – Aug 2010**  
*Computer Science Department, University of Southern California, Los Angeles, CA*

  - Designed and implemented XTEAM, a model-driven software design, analysis, and code generation toolset. XTEAM allows software architects to create domain-specific software architecture models, evaluate those models with respect to quality metrics, and automatically synthesize custom code. XTEAM has been utilized by more than a dozen software engineering projects in academia and industry.
  - Built key components of Prism-MW, a novel Java-based implementation platform for mobile and handheld devices that enables rapid development of event-based applications.
  - Invented the adaptive layered style, an architectural style for autonomous systems, and designed the corresponding implementation support in Prism-MW.
  - Developed iterative redundancy, an algorithm for reliably distributing and replicating computation on untrusted networks of faulty and malicious nodes.
  - Contributed as an architect and developer to a diverse set of experimental software systems, such as computer simulations of volunteer computing networks and collaboration tools for geographically distributed teams of engineers.
  
- **Research Associate** **May 2009 – Jan 2010**  
*Intelligent Systems Technology, Inc., Los Angeles, CA*

  - Designed and implemented an instructional game for US Army vehicle maintenance technicians that teaches techniques for making decisions in the presence of uncertainty.
  - Developed research grant proposals for DoD and DHS funding through the Small Business Innovation Research (SBIR) program and Broad Agency Announcements (BAAs).
  - Briefed managers of research funding programs at DoD and DHS on critical research challenges and opportunities in computer science and software engineering.
  
- **Graduate Research Intern** **May 2008 – Aug 2008**  
*T.J. Watson Research Center, IBM, Yorktown Heights, NY*

  - Developed elements of BlueStar, a scalable mobile device management and provisioning system. BlueStar allows system administrators to easily manage the configuration of thousands of mobile devices.
  - Co-designed Proxima, a context-aware search service for mobile devices. Proxima provides image-based search capabilities for finding people in a large database by leveraging contextual information associated with an image, such as location, time, and the unique characteristics of the user.
  - Developed requirements for a mobile application for insurance adjusters and managed a team of overseas programmers.

- **Software Engineer** **Jun 2005 – Aug 2006**  
*The Boeing Company, Huntington Beach, CA*

  - Advised, coordinated, and assisted C4ISR software architecture modeling and analysis efforts leveraging state-of-the-art model-driven engineering technologies.
  - Developed the architecture for a mobile (handheld) device for controlling unmanned autonomous air and ground robots.
  - Integrated multiple independent simulations of interactions among military vehicles and networks to create test harnesses for subcontractor-supplied software components.
  - Created and evaluated software architecture descriptions, guidance memoranda, requirements specifications, design models, trade studies, risk analyses, and development schedules.
  
- **Graduate Research Assistant** **Sept 2003 – May 2004**  
*Computer Science Department, Vanderbilt University, Nashville, TN*

  - Developed a CORBA Component Model framework that supports application access to highly optimized and scalable event-based (publish-subscribe) communication services.
  - Created a specification language and supporting toolset for configuring QoS policies in component-based DRE systems.
  - Designed regression tests and enhanced support for key capabilities in a real-time CORBA implementation.
  
- **Network Technician** **Oct 2002 – Mar 2003**  
*CTC Networks, Nashville, TN*

  - Administered Windows-based small business networks and performed network and PC upgrades, troubleshooting, and repair.
  - Advised business clients on software purchasing and technology infrastructure investment decisions.
  
- **e-Business Consultant** **May 2001 – Aug 2001**  
*Nebraska e-Commerce Association, Lincoln, NE*

  - Advised small businesses on e-commerce development and implementation strategies.
  
- **Web Developer** **May 1998 – Aug 2000**  
*Nebraska Educational Telecommunications, Lincoln, NE*

  - Developed front-end HTML and JavaScript and secure grade assessment software for CLASS, the first web-delivered, fully accredited high school.
  - Implemented a multimedia publishing system for web-based distribution of television programs.

#### LITIGATION CONSULTING

- **SEVEN Networks, LLC v. ZTE (USA) Inc. and ZTE Corporation** **Jan 2018 – Present**

  - Jurisdiction: U.S. District Court for the Northern District of Texas
  - Counsel: Pillsbury Winthrop Shaw Pittman
  - Nature of Suit: Patent
  
- **Space Data Corporation v. Alphabet Inc. and Google Inc.** **July 2017 – Present**

  - Jurisdiction: U.S. District Court for the Northern District of California
  - Counsel: Hosie Rice
  - Nature of Suit: Patent and Trade Secret

- **Hitachi Maxell, Ltd. v. ZTE Corp. and ZTE USA Inc.** **July 2017 – Present**

  - Jurisdiction: U.S. District Court for the Eastern District of Texas
  - Counsel: Pillsbury Winthrop Shaw Pittman LLP
  - Nature of Suit: Patent
  
- **Semcon IP Inc. v. ZTE Corporation, et al.** **May 2017 – Mar 2018**

  - Jurisdiction: U.S. District Court for the Eastern District of Texas
  - Counsel: Pillsbury Winthrop Shaw Pittman LLP
  - Nature of Suit: Patent
  
- **Vesta Corporation v. Amdocs Management Limited and Amdocs, Inc.** **Mar 2017 – Present**

  - Jurisdiction: U.S. District Court for the District of Oregon
  - Counsel: Perkins Coie LLP
  - Nature of Suit: Trade Secret
  
- **Masterobjects, Inc. v. eBay, Inc.** **Mar 2017 – Present**

  - Jurisdiction: U.S. District Court for the Northern District of California
  - Counsel: Hosie Rice LLP
  - Nature of Suit: Patent
  
- **Implicit, LLC v. Trend Micro, Inc.** **Jan 2017 – Oct 2017**

  - Jurisdiction: U.S. District Court for the Eastern District of Texas
  - Counsel: DiNovo Price Ellwanger LLP
  - Nature of Suit: Patent
  
- **Implicit, LLC v. Ericsson, Inc.** **Jan 2017 – Mar 2017**

  - Jurisdiction: U.S. District Court for the Eastern District of Texas
  - Counsel: DiNovo Price Ellwanger LLP
  - Nature of Suit: Patent
  
- **Sound View Innovations, LLC v. Facebook, Inc.** **Aug 2016 – Jan 2018**

  - Jurisdiction: U.S. District Court for the District of Delaware
  - Counsel: Desmarais LLP
  - Nature of Suit: Patent
  
- **Farmers Edge, Inc., et al. v. Farmobile LLC, et al.** **Jul 2016 – Present**

  - Jurisdiction: U.S. District Court for the District of Nebraska
  - Counsel: Husch Blackwell LLP
  - Nature of Suit: Trade Secret and Breach of Contract
  
- **Synca Direct Inc. v. Scil Animal Care Company and Vet Novations, Inc.** **Mar 2016 – Dec 2016**

  - Jurisdiction: U.S. District Court for the Northern District of New York
  - Counsel: White and Williams LLP
  - Nature of Suit: Breach of Contract

- **TiVo, Inc. v. Samsung Electronics Co., Ltd., et al.** **Mar 2016 – Nov 2016**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Irell & Manella LLP  
 - Nature of Suit: Patent
- **Backflip Software, Inc. v. Cisco Systems, Inc.** **Feb 2016 – Oct 2016**  
 - Jurisdiction: Superior Court of California, County of Santa Clara  
 - Counsel: Hosie Rice LLP  
 - Nature of Suit: Breach of Contract
- **Cellular Communications Equipment, LLC v. HTC Corporation and ZTE Corp.** **Dec 2015 – Present**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Pillsbury Winthrop Shaw Pittman LLP  
 - Nature of Suit: Patent
- **Ericsson Inc., et al. v TCL Communication Technology Holdings, Ltd., et al.** **Sep 2015 – Dec 2015**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Sheppard Mullin Richter & Hampton LLP  
 - Nature of Suit: Patent
- **Chipp'd Ltd. v. Crush & Lovely LLC** **Jul 2015 – Sep 2015**  
 - Jurisdiction: American Arbitration Association  
 - Counsel: White and Williams LLP  
 - Nature of Suit: Breach of Contract
- **Bryndon Fisher v. The United States of America** **Aug 2015 – Present**  
 - Jurisdiction: United States Court of Federal Claims  
 - Counsel: Schubert Jonckheer & Kolbe LLP  
 - Nature of Suit: Class Action
- **Seymore Levine v. The Boeing Company** **Jul 2015 – Jan 2016**  
 - Jurisdiction: U.S. District Court for the Central District of California  
 - Counsel: Quinn Emanuel Urquhart & Sullivan LLP  
 - Nature of Suit: Patent
- **Global Cash Access, Inc. v. NRT Technology Corp. et al.** **Jul 2015 – Mar 2016**  
 - Jurisdiction: U.S. District Court for the District of Nevada  
 - Counsel: Pillsbury Winthrop Shaw Pittman LLP  
 - Nature of Suit: Patent
- **Anthony Johnson v. Storix, Inc.** **Jun 2015 – Dec 2015**  
 - Jurisdiction: U.S. District Court for the Southern District of California  
 - Counsel: Eastman & McCartney LLP  
 - Nature of Suit: Copyright

- **Custom Media Technologies LLC v. AT&T Services, Inc., et al.** **Apr 2015 – Jun 2015**  
 - Jurisdiction: U.S. District Court for the District of Delaware  
 - Counsel: Freitas Angell & Weinberg LLP  
 - Nature of Suit: Patent
- **Huricks et al. v. Shopkick, Inc.** **Apr 2015 – Aug 2015**  
 - Jurisdiction: U.S. District Court for the Northern District of California  
 - Counsel: Newman DuWors, LLP  
 - Nature of Suit: Telephone Consumer Protection Act (TCPA)
- **Fox Television Stations, Inc. v. FilmOn X, LLC, et al.** **Mar 2015 – Jul 2015**  
 - Jurisdiction: U.S. District Court for the District of Columbia  
 - Counsel: Baker Marquart LLP  
 - Nature of Suit: Copyright
- **e-Watch, Inc. et al. v. ZTE Solutions, Inc., ZTE (USA) Inc. and ZTE Corp.** **Mar 2015 – Jan 2017**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Pillsbury Winthrop Shaw Pittman LLP  
 - Nature of Suit: Patent
- **Novatel Wireless, Inc., et al. v. ZTE Corp. and ZTE (USA) Inc.** **Jan 2015 – Jul 2015**  
 - Jurisdiction: U.S. District Court for the Southern District of California  
 - Counsel: Pillsbury Winthrop Shaw Pittman LLP  
 - Nature of Suit: Patent
- **Essociate, Inc. v. Clickbooth.com, LLC** **Oct 2014 – Feb 2015**  
 - Jurisdiction: U.S. District Court for the Central District of California  
 - Counsel: Newman DuWors, LLP  
 - Nature of Suit: Patent
- **Adaptix, Inc. v. ZTE Corporation, ZTE Solutions, Inc., and ZTE (USA) Inc.** **Sep 2014 – Jul 2016**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Pillsbury Winthrop Shaw Pittman LLP  
 - Nature of Suit: Patent
- **VStream Technologies, LLC v. ZTE Corporation and ZTE (USA) Inc., et al.** **Sep 2014 – Jul 2015**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Pillsbury Winthrop Shaw Pittman LLP  
 - Nature of Suit: Patent
- **State of California v. Burlena King** **Aug 2014 – Sep 2014**  
 - Jurisdiction: Superior Court of California, County of Los Angeles  
 - Counsel: Law Offices of the Los Angeles County Public Defender  
 - Nature of Suit: Criminal

- **Hill-Rom Company, Inc., et al. v. General Electric Company** **Jul 2014 – Sep 2014**

  - Jurisdiction: U.S. District Court for the Eastern District of Virginia
  - Counsel: Schiff Hardin LLP
  - Nature of Suit: Patent
  
- **Personal Audio LLC v. ZTE Corporation, et al.** **Jul 2014 – May 2015**

  - Jurisdiction: U.S. District Court for the Eastern District of Texas
  - Counsel: Pillsbury Winthrop Shaw Pittman LLP
  - Nature of Suit: Patent
  
- **Yardi Systems, Inc. v. Property Solutions International, Inc.** **May 2014 – Present**

  - Jurisdiction: U.S. District Court for the Central District of California
  - Counsel: Morrison & Foerster, LLP
  - Nature of Suit: Copyright and Trade Secret
  
- **AgJunction, LLC v. Agrian, Inc. et al.** **Apr 2014 – Feb 2015**

  - Jurisdiction: U.S. District Court for the District of Kansas
  - Counsel: Husch Blackwell LLP
  - Nature of Suit: Copyright and Trade Secret
  
- **Davies v. L.A. Checker Cab** **Apr 2014 – Jun 2014**

  - Jurisdiction: Superior Court of California, County of Los Angeles
  - Counsel: Cheong, Denove, Rowell & Bennett
  - Nature of Suit: Negligence
  
- **Inter Partes Review of U.S. Patent No. 8,466,795** **Feb 2014 – Jul 2014**

  - Jurisdiction: U.S. Patent and Trademark Office
  - Counsel: Pillsbury Winthrop Shaw Pittman LLP
  - Nature of Suit: Patent
  
- **Certain Wireless Devices, Including Mobile Phones And Tablets II** **Feb 2014 – Jul 2014**

  - Jurisdiction: U.S. International Trade Commission
  - Counsel: Pillsbury Winthrop Shaw Pittman LLP
  - Nature of Suit: Patent
  
- **Pragmatus Mobile, LLC v. ZTE Corporation** **Feb 2014 – Jul 2014**

  - Jurisdiction: U.S. District Court for the District of Delaware
  - Counsel: Pillsbury Winthrop Shaw Pittman LLP
  - Nature of Suit: Patent
  
- **Intellectual Ventures, LLC v. AT&T Mobility, LLC, et al.** **Oct 2013 – May 2015**  
**Intellectual Ventures, LLC v. T-Mobile USA, Inc., et al.**  
**Intellectual Ventures, LLC v. Nextel Operations, Inc., et al.**  
**Intellectual Ventures, LLC v. United States Cellular Corporation**

  - Jurisdiction: U.S. District Court for the District of Delaware
  - Counsel: Dechert LLP
  - Nature of Suit: Patent

- **Front Row Technologies, LLC v. NBA Media Ventures, LLC, et al.** **Oct 2013 – July 2016**  
 - Jurisdiction: U.S. District Court for the District of New Mexico  
 - Counsel: Shore Chan DePumpo LLP  
 - Nature of Suit: Patent
- **Nokia Corporation and Nokia Inc. v. HTC Corporation and HTC America, Inc.** **Dec 2013 – Feb 2014**  
 - Jurisdiction: U.S. District Court for the District of Delaware  
 - Counsel: Desmarais LLP  
 - Nature of Suit: Patent
- **Certain Portable Electronic Communications Devices, Including Mobile Phones and Components Thereof** **Aug 2013 – Feb 2014**  
 - Jurisdiction: U.S. International Trade Commission  
 - Counsel: Desmarais LLP  
 - Nature of Suit: Patent
- **SecurityBase.com v. Jeffrey Essick, et al.** **Aug 2013 – Jun 2015**  
 - Jurisdiction: Superior Court of California, County of Orange  
 - Counsel: Younesi & Yoss, LLP  
 - Nature of Suit: Copyright and Trade Secret
- **Nokia Corp. and Intellisync Corp. v. HTC America, Inc., and Exedeia, Inc.** **Feb 2013 – May 2013**  
 - Jurisdiction: U.S. District Court for the District of Delaware  
 - Counsel: Desmarais LLP  
 - Nature of Suit: Patent
- **Certain Electronic Devices, Including Mobile Phones and Tablet Computers, and Components Thereof** **Feb 2013 – May 2013**  
 - Jurisdiction: U.S. International Trade Commission  
 - Counsel: Desmarais LLP  
 - Nature of Suit: Patent
- **Essociate, Inc. v. Azoogole.com, Inc. and Epic Media Group, Inc.** **Nov 2012 – Oct 2013**  
 - Jurisdiction: U.S. District Court for the Western District of Wisconsin  
 - Counsel: Newman DuWors, LLP  
 - Nature of Suit: Patent
- **John Doe v. Passageway School** **Oct 2012 – Dec 2012**  
 - Jurisdiction: Superior Court of California, County of Ventura  
 - Counsel: Stone & Hiles, LLP  
 - Nature of Suit: Negligence
- **Essociate, Inc. v. Neverblue Media, Inc.** **Sep 2012 – Jul 2013**  
 - Jurisdiction: U.S. District Court for the Central District of California  
 - Counsel: Newman DuWors, LLP  
 - Nature of Suit: Patent



- **Porto Technology Co., Ltd. v. Cellco Partnership d/b/a Verizon Wireless** **Sep 2012 – Feb 2014**  
 - Jurisdiction: U.S. District Court for the Eastern District of Virginia  
 - Counsel: Fox Rothschild LLP  
 - Nature of Suit: Patent
- **Flashpoint Technology, Inc. v. ZTE Corporation** **Aug 2012 – Mar 2013**  
 - Jurisdiction: U.S. District Court for the District of Delaware  
 - Counsel: Goodwin Procter LLP  
 - Nature of Suit: Patent
- **Certain Electronic Imaging Devices** **Aug 2012 – Mar 2013**  
 - Jurisdiction: U.S. International Trade Commission  
 - Counsel: Goodwin Procter LLP  
 - Nature of Suit: Patent
- **MobileMedia Ideas, LLC v. HTC Corporation and HTC America, Inc.** **Jul 2012 – May 2013**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Desmarais LLP  
 - Nature of Suit: Patent
- **Golden Archer Investments, LLC v. SkyNet Financial Systems, LLC** **Jul 2012 – Dec 2012**  
 - Jurisdiction: U.S. District Court for the Southern District of New York  
 - Counsel: Goldman Ismail Tomaselli Brennan & Baum LLP  
 - Nature of Suit: Breach of Contract
- **Inter Partes Re-examination of U.S. Patent No. 7,702,669** **May 2012 – Jul 2012**  
 - Jurisdiction: U.S. Patent and Trademark Office  
 - Counsel: Hickman Palermo Truong Becker Bingham Wong LLP  
 - Nature of Suit: Patent
- **Denise Black v. Prowess, Inc.** **Mar 2012 – May 2012**  
 - Jurisdiction: State of New York, Supreme Court, County of Ontario  
 - Counsel: Smith, Sovik, Kendrick & Sugnet, PC  
 - Nature of Suit: Breach of Contract
- **Essociate, Inc. v. Direct ROI, LLC** **Mar 2012 – Jun 2012**  
 - Jurisdiction: U.S. District Court for the Central District of California  
 - Counsel: Newman DuWors, LLP  
 - Nature of Suit: Patent
- **EchoStar Technologies, Corp. v. TiVo Inc. and Humax USA, Inc.** **Mar 2011 – Apr 2011**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Morrison & Foerster, LLP  
 - Nature of Suit: Patent

## JOURNAL AND MAGAZINE ARTICLES

- Mahdi Eslamimehr, George Edwards, and Mohsen Lesani, ***Efficient Detection and Validation of Atomicity Violations in Concurrent Programs***, Journal of Systems & Software, 2017.
- Yuriy Brun, Jae young Bang, George Edwards, and Nenad Medvidovic, ***Self-Adapting Reliability in Distributed Software Systems***, IEEE Transactions on Software Engineering, 2015.
- Chris A. Mattmann, Nenad Medvidovic, Sam Malek, George Edwards and Somo Banerjee, ***A Middleware Platform for Providing Mobile and Embedded Computing Instruction to Software Engineering Students***, IEEE Transactions on Education, 2012.
- Nenad Medvidovic, Hossein Tajalli, Joshua Garcia, Yuriy Brun, Ivo Krka, and George Edwards, ***Engineering Heterogeneous Robotics Systems: A Software Architecture-Based Approach***, IEEE Computer, 2011.
- Nenad Medvidovic and George Edwards, ***Software Architecture and Mobility: A Roadmap***, Journal of Systems and Software (JSS): Special Issue on Software Architecture and Mobility, 2010.
- Nenad Medvidovic, Hossein Tajalli, Joshua Garcia, Yuriy Brun, Ivo Krka, George Edwards, Marija Mikic-Rakic, Sam Malek, and Gaurav Sukhatme, ***An Architecture-Driven Software Mobility Framework***, Journal of Systems and Software (JSS): Special Issue on Software Architecture and Mobility, 2010.
- George Edwards, Chiyong Seo, and Nenad Medvidovic, ***Model Interpreter Frameworks: A Foundation for the Analysis of Domain-Specific Software Architectures***, Journal of Universal Computer Science (JUCCS): Special Issue on Software Components, Architectures and Reuse, 2008.
- Aniruddha Gokhale, Krishnakumar Balasubramanian, Jaiganesh Balasubramanian, Arvind Krishna, George T. Edwards, Gan Deng, Emre Turkay, Jeffrey Parsons, and Douglas C. Schmidt, ***Model-Driven Middleware: A New Paradigm for Deploying and Provisioning Distributed Real-time and Embedded Applications***, Elsevier Journal of the Science of Computer Programming: Special Issue on Model Driven Architecture, 2005.

## CONFERENCE PAPERS

- Christoph Dorn, George Edwards, and Nenad Medvidovic, ***Analyzing Design Tradeoffs in Large-scale Socio-Technical Systems through Simulation of Dynamic Collaboration Patterns***, Proceedings of the 20th International Conference on Cooperative Information Systems (CoopIS), September 2012.
- George Edwards, Nenad Medvidovic, and Yuriy Brun, ***Automated Analysis and Code Generation for Domain-Specific Models***, Proceedings of the Joint 10th Working IEEE/IFIP Conference on Software Architecture & 6th European Conference on Software Architecture (WICSA/ECSA), August 2012.
- George Edwards, Yuriy Brun, and Nenad Medvidovic, ***Isomorphism in Model Tools and Editors***, Proceedings of the 26th IEEE/ACM International Conference on Automated Software Engineering (ASE), November 2011.

- Yuriy Brun, George Edwards, Jae young Bang and Nenad Medvidovic, **Smart Redundancy for Distributed Computation**, Proceedings of 31st International Conference on Distributed Computing Systems (ICDCS), June 2011.
- Hossein Tajalli, Joshua Garcia, George Edwards, and Nenad Medvidovic, **PLASMA: A Plan-based Layered Architecture for Software Model-driven Adaptation**, Proceedings of the 25th IEEE/ACM International Conference on Automated Software Engineering (ASE), September 2010.
- Jae young Bang, Daniel Popescu, George Edwards, Nenad Medvidovic, Naveen Kulkarni, Girish M. Rama, and Srinivas Padmanabhuni, **CoDesign - A Highly Extensible Collaborative Software Modeling Framework**, Research Demonstrations Track, Proceedings of the ACM/IEEE 32nd International Conference on Software Engineering (ICSE), May 2010.
- Ivo Krka, George Edwards, Yuriy Brun and Nenad Medvidovic, **Synthesizing Partial Component-Level Behavior Models from System Specifications**, Proceedings of the 7th Joint Meeting of the European Software Engineering Conference and ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), August 2009.
- Joshua Garcia, Daniel Popescu, George Edwards and Nenad Medvidovic, **Toward a Catalogue of Architectural Bad Smells**, Proceedings of the 5<sup>th</sup> International Conference on the Quality of Software Architectures (QoSA), June 2009.
- Ivo Krka, George Edwards, Yuriy Brun and Nenad Medvidovic, **From System Specifications to Component Behavioral Models**, New Ideas and Emerging Results Track, Companion Volume of the 31st International Conference on Software Engineering (ICSE), May 2009.
- Joshua Garcia, Daniel Popescu, George Edwards and Nenad Medvidovic, **Identifying Architectural Bad Smells**, Proceedings of the 13<sup>th</sup> European Conference on Software Maintenance and Reengineering (CSMR), March 2009.
- Steve Mastrianni, David Bantz, Terrence Buechner, Tom Chefalas, George Edwards, Song Jinho, Dong Jun Lan, Gary Leonardi, Leslie Liu, Randy Moulic, Dennis G. Shea, Andrew Wyskida, **BlueStar: Managed Services for Enterprise Mobility**, Proceedings of the IEEE International Conference on e-Business Engineering (ICEBE), October 2008.
- George Edwards, Leslie S. Liu, and Randy Moulic, **Proxima: A Mobile Augmented-Image Search System**, Proceedings of the ACM International Conference on Multimedia (ACMMM), October 2008.
- George Edwards and Nenad Medvidovic, **A Methodology and Framework for Creating Domain-Specific Development Infrastructures**, Proceedings of the 23<sup>rd</sup> IEEE ACM International Conference on Automated Software Engineering (ASE), September 2008.
- Chiyong Seo, George Edwards, Sam Malek and Nenad Medvidovic, **A Framework for Estimating the Impact of a Distributed Software System's Architectural Style on its Energy Consumption**, Proceedings of the Working International Conference on Software Architecture (WICSA), February 2008.

- George Edwards, Chiyong Seo, and Nenad Medvidovic, **Construction of Analytic Frameworks for Component-Based Architectures**, Proceedings of the Brazilian Symposium on Software Components, Architectures and Reuse (SBCARS), August 2007.
- Gan Deng, Ming Xiong, Aniruddha Gokhale, and George Edwards, **Evaluating Real-time Publish/Subscribe Service Integration Approaches in QoS-enabled Component Middleware**, Proceedings of the 10<sup>th</sup> IEEE International Symposium on Object-oriented Real-time Distributed Computing (ISORC), May 2007.
- George Edwards, Sam Malek, and Nenad Medvidovic, **Scenario-Driven Dynamic Analysis of Distributed Architectures**, Proceedings of the 10<sup>th</sup> International Conference on Fundamental Approaches to Software Engineering (FASE), March 2007.
- George Edwards, Gan Deng, Douglas C. Schmidt, Aniruddha Gokhale, and Balachandran Natarajan, **Model-Driven Configuration and Deployment of Component Middleware Publisher/Subscriber Services**, Proceedings of the 3<sup>rd</sup> ACM International Conference on Generative Programming and Component Engineering (GPCE), October 2004.
- George Edwards, Douglas C. Schmidt, Aniruddha Gokhale, and Bala Natarajan, **Integrating Publisher/Subscriber Services in Component Middleware for Distributed Real-time and Embedded Systems**, Proceedings of the 42<sup>nd</sup> Annual ACM Southeast Conference (ACMSE), April 2004.

#### WORKSHOP PAPERS

- Arman Shahbazian, George Edwards and Nenad Medvidovic, **An End-to-End Domain Specific Modeling and Analysis Platform**, 8th Workshop on Modelling in Software Engineering (MiSE), May 2016.
- Chiyong Seo, George Edwards, Daniel Popescu, Sam Malek and Nenad Medvidovic, **A Framework for Estimating the Energy Consumption Induced by a Distributed System's Architectural Style**, 8<sup>th</sup> Workshop on Specification and Verification of Component-Based Systems (SAVCBS), August 2009.
- George Edwards, Joshua Garcia, Hossein Tajalli, Daniel Popescu, Nenad Medvidovic, Gaurav Sukhatme, and Brad Petrus, **Architecture-Driven Self-Adaptation and Self-Management in Robotics Systems**, Proceedings of the Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS), May 2009.
- Ivo Krka, Leslie Cheung, George Edwards, Leana Golubchik and Nenad Medvidovic, **Architecture-Based Software Reliability Estimation: Problem Space, Challenges, and Strategies**, Proceedings of the Workshop on Architecting Dependable Systems (WADS), June 2008.
- George Edwards, Chiyong Seo, Daniel Popescu, Sam Malek, and Nenad Medvidovic, **Self-\* Software Architectures and Component Middleware in Pervasive Environments**, Proceedings of the 5<sup>th</sup> International Workshop on Middleware for Pervasive and Ad-Hoc Computing (MPAC), November 2007.

- Chiyong Seo, Sam Malek, George Edwards, Daniel Popescu, Nenad Medvidovic, Brad Petrus, and Sharmila Ravula, ***Exploring the Role of Software Architecture in Fault-Tolerant and Dynamic Pervasive Systems***, Proc. of 1<sup>st</sup> Workshop on Software Engineering of Pervasive Computing Applications, Systems and Environments (SEPCASE), May 2007.

#### BOOK CHAPTERS

- Ivo Krka, George Edwards, Leslie Cheung, Leana Golubchik, and Nenad Medvidovic, ***A Comprehensive Exploration of Challenges in Architecture-Based Reliability Estimation***, Architecting Dependable Systems 6, R. de Lemos, J.-C. Fabre, C. Gacek, F. Gadducci, M. ter Beek (Eds.), 2009.

#### POSTERS AND DEMONSTRATIONS

- ***BlueStar Mobile Management Services***, IBM Research Technology Fair, June 2008.
- ***The Extensible Tool-chain for Evaluation of Architectural Models***, USC Center for Software and Systems Engineering Convocation, October 2006.
- ***A Model-Driven Framework for Architectural Evaluation of Mobile Software Systems***, UCI Institute for Software Research Forum, April 2006.

#### INVITED TALKS

- ***Metamodeling-Enabled Model-Checking for Complex Systems***, Systems Engineering Research Center (SERC) Annual Research Review, November 2010.
- ***XTEAM: Automated Synthesis of Domain-Specific Code Generators***, Northrop Grumman Technology Day Research Showcase, Information Systems Track, May 2010.
- ***Domain-Specific Model Analysis and Code-Generation Frameworks***, Ground Systems Architecture Workshop (GSAW), Architecture-Centric Evolution (ACE) Working Group, March 2010.
- ***Automated Analysis and Code Generation for Domain-Specific Models***, USC Computer Science Department Annual Research Review, March 2010.
- ***Automated Analysis and Code Generation for Domain-Specific Models***, USC Center for Software and Systems Engineering Annual Research Review, March 2010.
- ***Model-Driven Analysis Frameworks for Embedded Systems***, USC Center for Software and Systems Engineering Annual Research Review, March 2009.
- ***Creating Domain-Specific Development Infrastructures***, USC Center for Software and Systems Engineering Annual Research Review, March 2008.
- ***Weighing Architectural Trade-offs with XTEAM***, USC Center for Software and Systems Engineering Annual Research Review, February 2007.

## TECHNICAL REPORTS

- George Edwards, Yuriy Brun, and Nenad Medvidovic, ***Automated Analysis and Code Generation for Domain-Specific Models***, Technical Report USC-CSSE-2010-517, Center for Software and Systems Engineering, University of Southern California, August 2010.
- George Edwards and Nenad Medvidovic, ***Model Interpreter Frameworks***, Technical Report USC-CSSE-2009-514, USC Center for Software and Systems Engineering, Center for Software and Systems Engineering, University of Southern California, July 2009.
- George Edwards and Nenad Medvidovic, ***A Highly Extensible Simulation Framework for Domain-Specific Architectures***, Technical Report USC-CSSE-2009-511, Center for Software and Systems Engineering, Univ. of Southern California, May 2009.
- Yuriy Brun, George Edwards, and Nenad Medvidovic, ***Injecting Robustness into Autonomic Grid Systems***, Technical Report USC-CSSE-2009-510, USC Center for Software and Systems Engineering, University of Southern California, May 2009.

## PATENT APPLICATIONS

- ***Method and Apparatus for Simulation of Domain-Specific Models***. U.S. Provisional Patent Application 61/513,357, filed July 29, 2011. (abandoned)
- ***Extensible Collaborative Software Modeling***. U.S. Patent Application 13/271,008, filed October 11, 2011. (abandoned)

## HONORS AND AWARDS

- **2008 USC Computer Science Outstanding Student Research Award**
  - Awarded each year for exceptional research achievement by a graduate student in computer science.
- **Annenberg Graduate Fellowship**, Aug 2007
  - Supports highly qualified graduate students to conduct cutting-edge communication and digital media research and advance important new programs in the communications arena.
- **USC Viterbi School of Engineering Dean's Doctoral Fellowship**, May 2004
  - Supports world-class students for four years in the pursuit and publication of research leading to the doctoral degree.
- **Vanderbilt Summa Cum Laude graduate**, Aug 2003
  - Awarded to graduates whose grade point average equals or exceeds that of the top 5 percent of the previous year's graduating seniors.
- **NSF Research Experiences for Undergraduates Grant**, June 2003
  - Supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation.

- **Vanderbilt Dean's List with High Honors**, Dec 2000, May '01, Dec '01, May '02, Dec '02, May '03  
- Recognizes outstanding academic performance in a semester. Students are named to the Dean's List when they earn a grade point average of at least 3.500.
- **Vanderbilt School of Engineering Merit Scholarship**, May 2000  
- Awarded to approximately 5 percent of all applicants based on exceptional accomplishment and high promise in intellectual endeavors.
- **National Merit Scholar**, May 2000  
- Awarded for academic achievement to 8,200 high school students each year out of 1.5 million entrants.

## TEACHING

- **Lecturer**, CSCI 102 – Data Structures, Fall 2012
- **Lecturer**, CSCI 568 – Requirements Engineering, Spring 2012, Spring 2013, Spring 2014, Spring 2015, Spring 2016
- **Teaching Assistant**, Infosys Intensive Course on Software Architecture, December 2009.
- **Guest Lecturer**, CSCI 589 – Software Engineering for Embedded Systems, Fall 2007, Fall 2008.
- **Guest Lecturer**, CSCI 377 – Introduction to Software Engineering, Fall 2007, Fall 2008, Fall 2009.
- **Guest Lecturer**, SAE 599 – Model-Driven Systems Architecture, Summer 2007, Spring 2008.
- **Teaching Assistant**, CSCI 589 – Software Engineering for Embedded Systems, Fall 2006.

## RESEARCH COMMUNITY SERVICE

- Reviewer for the **Journal of Systems and Software**, Elsevier, 2010 – 2013.
- Reviewer for **IEEE Transactions on Software Engineering (TSE)**, 2010 – 2012.
- Reviewer for the **50th International Conference on Objects, Models, Components, Patterns (TOOLS Europe)**, Prague, Czech Republic, May 28 – June 1, 2012.
- Program Committee Member for the **Research in Applied Computation Symposium (RACS)**, Miami, FL, November 2 – 5, 2011.
- Reviewer for the **Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS), Cape Town**, South Africa, May 3 – 4, 2010.
- Reviewer for the **24th IEEE/ACM International Conference on Automated Software Engineering (ASE)**, Auckland, New Zealand, November 16 – 20, 2009.

- Reviewer for **DSN 2009 Workshop on Architecting Dependable Systems (WADS)**, Lisbon, Portugal, June 29, 2009.
- Reviewer for **Architecting Dependable Systems 6**, Springer Publishing, 2009.
- Reviewer for the **6th IEEE International Conference on Autonomic Computing (ICAC)**, June 15 – 19, 2009.
- Reviewer for **IEEE Software Special Issue: Domain-Specific Languages & Modeling**, July/August, 2009.
- Reviewer for the **23rd International Conference on Automated Software Engineering (ASE)**, L'Aquila, Italy, Sept. 15 – 19, 2008.
- Reviewer for the **Working IEEE/IFIP Conference on Software Architecture (WICSA)**, Vancouver, Canada, February 18 – 21, 2008.
- Program Committee Member for the **Institute for Software Research (ISR) Graduate Student Research Symposium (GSRs)**, Irvine, CA, June 1, 2007.
- Reviewer for the **3rd International Conference on the Quality of Software Architectures (QoSA)**, Boston, MA, July 12 – 13, 2007.
- Reviewer for the **10th International ACM SIGSOFT Symposium on Component-Based Software Engineering (CBSE)**, Boston, MA, July 9 – 11, 2007.
- Reviewer for the **First IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO)**, Boston, MA, July 9 – 11, 2007.
- Reviewer for the **Second Workshop on Sharing and Reusing Architectural Knowledge - Architecture, Rationale, and Design Intent (SHARK/ADI)**, Minneapolis, MN, May 19 – 20, 2007.
- Reviewer for the **Workshop on Tools, Operating Systems and Programming Models for Developing Reliable Systems (TOPMoDeIS)**, Long Beach, CA, March 26 – 30, 2007.

#### PROFESSIONAL ASSOCIATIONS

- **Member**, Association for Computer Machinery (ACM) and ACM Special Interest Group on Simulation and Modeling
- **Member**, IEEE Computer Society





**Exponent**<sup>®</sup>  
Engineering & Scientific Consulting

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## Professional Profile

Dr. Martens applies his expertise as an electrical engineer to the scientific investigation of electrical engineering matters. He specializes in control systems and software, microprocessor-based computer systems, circuit design and analysis, electronic components failure analysis, automotive control systems, machine and process controls (including PLC, DCS and SCADA), robotics and automation, and computer vision. Dr. Martens has led complex investigations related to fires, transportation, consumer products, machine control, and industrial process control.

Prior to joining Exponent, Dr. Martens managed the embedded control systems group at Delphi Corporation, a leading global supplier of mobile electronics and transportation systems, and led an R & D team from development to commercialization of an active rear steering system for improved vehicle performance. Dr. Martens has experience developing and testing electronic stability control systems. Dr. Martens' robotic experience includes developing methods and algorithms for the automatic control of a stair-climbing mobile robot. He has experience programming PLCs and analyzing process control systems.

As a member of Delphi's Innovation Center, Dr. Martens actively supported Delphi's Intellectual Property (IP) portfolio as an inventor (8 United States patents and 1 European patent) and provided analyses related to patent prosecution, validity, and infringement questions as well as prior art research and enablement. Dr. Martens has continued his active involvement in IP matters at Exponent. His most recent IP activity has involved products such as software-controlled systems including computer hard drive control and fluid delivery systems.

Dr. Martens' facilities management experience at Delphi includes equipment specification, procurement, installation, and maintenance. His facilities experience also includes the maintenance of a mechatronics research and development laboratory containing several industrial robots and control systems.

Dr. Martens is active in the field of industrial process control, including burner management and combustion control systems for industrial boilers and furnaces. He has advised his clients regarding the appropriate level of safeguards necessary for the safe operation and control of their systems, assisted them in implementing those safeguards, and audited their installations. He draws from his accident investigation experience and his knowledge of industry standards to perform process hazard analyses.

## Academic Credentials & Professional Honors

M.B.A., University of Michigan, Ann Arbor, with high distinction, 2003

Ph.D., Electrical Engineering and Computer Science, Case Western Reserve University, 2000

M.S., Electrical Engineering and Applied Physics, Case Western Reserve University, 1993

B.S., Electrical Engineering and Applied Physics, Case Western Reserve University, summa cum laude, 1993

Tau Beta Pi Engineering Honor Society

Eta Kappa Nu/IEEE's Award for Outstanding Senior in Electrical Engineering

Ohio Aerospace Institute Fellowship

Centerior Energy Fellowship

General Motors Scholarship

Case Alumni Association Scholarship

Dean's High Honors

### Licenses and Certifications

Licensed Professional Engineer, Illinois, #062-058837

Licensed Professional Engineer, Michigan, #6201057824

Licensed Professional Engineer, Missouri, #2010036256

Licensed Professional Engineer, North Carolina, #037584

Licensed Professional Engineer, Ohio, #E-65142

Licensed Professional Engineer, Texas, #105276

Licensed Professional Engineer, West Virginia, #19078

Licensed Professional Engineer, District of Columbia, #PE906421

Licensed Professional Engineer, New York, #086510-1

Licensed Professional Engineer, Kansas, #PE25630

Certified Fire and Explosion Investigator (CFEI), #17603-9653

Crash Data Retrieval Technician Levels 1 & 2, Collision Safety Institute

### Prior Experience

Manager, Embedded Control Systems, Delphi, Brighton, MI, 2004-2005

Project Manager, Active Chassis Systems, Delphi, Brighton, MI, 2000-2004

Research Assistant, Electrical Engineering and Applied Physics, Case Western Reserve University, Cleveland, OH, 1997-2000

Project Manager, CAM-LEM, Inc., Cleveland, OH, 1996-1997

Advanced Chassis Control Engineer, Delco Chassis, Division of General Motors, Dayton, OH, 1995-1996

Advanced Facilities Engineer, Delco Chassis, Division of General Motors, Dayton, OH, 1994-1995

Laboratory Facilities Manager, Center for Automation and Intelligent Systems Research (CAISR)  
Mechatronics Laboratory, Case Western Reserve University, Cleveland, OH, 1992-1993

Intern, Delco Chassis, Division of General Motors, Dayton, OH, 1991

Intern, Delco Chassis, Division of General Motors, Rochester, NY, 1990

Repair Technician, Affiliated T.V. Shops, Eastlake, OH, 1988-1989

## Professional Affiliations

Institute of Electrical and Electronic Engineers — IEEE (senior member)

Subcommittee Member for Guidelines for Safe Automation of Chemical Processes, 2nd Edition. Center for Chemical Process Safety, American Institute of Chemical Engineers, Wiley, 2017

International Society of Automation — ISA (member)

National Fire Protection Association — NFPA (member)

Principal Member: Technical Committee on Single Burner Boilers, NFPA 85 Boiler and Combustion Systems Hazards Code, National Fire Protection Association, effective August 2015

Alternate Member: ASME CSD-1 Standard, Controls and Safety Devices for Automatically Fired Boilers, effective June 2017

Alternate Member: ASME Board on Safety Codes and Standards, effective March 2018

American Society of Mechanical Engineers — ASME (member)

National Association of Fire Investigators — NAFI (member)

Society of Automotive Engineers International — SAE (member)

## Patents

Patent 6,789,002 B1: Determination of Vehicle Payload Condition, September 7, 2004 (with A. Hac).

Patent 6,804,594 B1: Active Steering for Handling/Stability Enhancement, October 12, 2004 (with T. Brown, A. Chandy, H. Chen, and C. Gryczan).

Patent 6,862,506 B2: Method for Automatically Adjusting Reference Models in Vehicle Stability Enhancement (VSE) Systems, March 1, 2005 (with E. Bedner, K. Boswell, H. Chen, and B. McDonald).

Patent 6,879,896 B2: System and Method for Using Vehicle Operator Intent to Adjust Vehicle Control System Response, April 12, 2005.

Patent 6,926,114 B2, Assist Modification in Active Front Steering, August 9, 2005 (with F. Bolourchi, K.

Boswell, J. Dickinson, and E. Bedner).

Patent 6,942,057 B2: Feel Control for Active Steering, September 13, 2005 (with K. Boswell and F. Bolourchi).

Patent 7,083,025 B2: Method for Implementing Vehicle Stability Enhancement Reference Models for Active Steer Systems, August 1, 2006 (with E. Bedner and K. Boswell).

Patent 7,213,675 B2: Method and System for Anti-Static Steering for Vehicle Steering Systems, May 8, 2007 (with C. Gryczan).

European Patent EP 1357013B1: System and Method for Using Vehicle Operator Intent to Adjust Vehicle Control System Response, June 6, 2007.

European Patent Application 02078139.9: Method for Automatically Adjusting Reference Models in Vehicle Stability Enhancement Systems.

European Patent Application 02079498.8: Feel Control for Active Steering.

## Publications

Bobbitt B, Garner S, Cox B, Martens J, Fecke M. Manual vs. automatic boiler controls: A historical perspective from relevant codes and standards. Proceedings of the ASME 2017 Power and Energy Conference 2017. (Accepted).

Fecke M, Martens J, Cox B, Bishop J. Codes, standards, and guidelines for plant steam utilities. Exponent Electrical Engineering & Computer Science Newsletter, Volume 4, 2016.

Martens J, Sinenian N. Usage-based insurance devices. Exponent Electrical Engineering & Computer Science Newsletter, Volume 1, 2015.

Arora A, Martens JD. Energy storage for BEV's: An engineering perspective. IEEE Transportation Electrification Conference and Expo (ITEC' 13), Dearborn, MI, June 16-19, 2013. (Half-day tutorial).

Martens JD, Arora A. Understanding the role of software in product failures. IEEE Symposium on Product Compliance Engineering, Portland, OR, November 5-7, 2012.

Morrison DR, Fecke M, Martens, JD. Migrating an incident reporting system to a CCPS process safety metrics model. Journal of Loss Prevention in the Process Industries 2011.

Martens JD, Fecke, M, Ogle, RA, Bishop, JA. Functional testing for industrial control systems. Proceedings, ASME 2011 International Mechanical Engineering Congress & Exhibition IMECE2011, Denver, CO, November 11-17, 2011.

Arora A, Martens JD, Babic D. AC & DC adapters safety considerations. IEEE Symposium on Product Compliance Engineering, San Diego, CA, October 10-12, 2011.

Fecke M, Martens JD, Cowells J, Morrison DR. A guide to developing and implementing safety checklists: Plant steam utilities. Process Safety Progress 2011; 30(3):240-250.

Ramirez JC, Fecke M, Morrison DR, Martens JD. Root cause analysis of an industrial boiler explosion (and how hazard analysis could have prevented it). Proceedings, ASME 2010 International Mechanical Engineering Congress & Exhibition IMECE2010, Vancouver, Canada, November 12-18, 2010.

Morrison DR, Fecke M, Martens JD. Migrating an organizational incident reporting system to a CCPS

process safety metrics model. 2010 Annual Symposium, Mary Kay O'Connor Process Safety Center, Texas A&M University, College Station, TX, October 26, 2010.

Fecke M, Morrison DR, Martens JD, Cowells JT. A guide to developing and implementing safety checklists: Plant steam utilities. American Institute of Chemical Engineers, 2010 Spring National Meeting, 25th Center for Chemical Process Safety International Conference, San Antonio, TX, March 22-24, 2010.

Morrison DR, Martens JD, Ogle RA, Cowells JT. Root cause analysis of a cryogenic refrigeration system explosion. American Institute of Chemical Engineers, 2009 Spring National Meeting, 43rd Annual Loss Prevention Symposium, Tampa, FL, April 26-30, 2009.

Morrison DR, Martens JD, Ogle RA, Cowells JT. Accident investigation using process control event diagrams. American Institute of Chemical Engineers, 2009 Spring National Meeting, 24th Annual CCPS International Conference, Tampa, FL, April 26-30, 2009.

Martens JD, Johnson G, So P. Design considerations for consumer products utilizing high voltage. Presentation, 2006 IEEE Symposium on Product Safety and Compliance Engineering, IEEE Product Safety Engineering Society, (PSES), Irvine, CA, October 23-24, 2006. Also approved for publication in the IEEE PSES 2006 Conference Proceedings.

Martens JD, Hac A, Brown T. Detection of vehicle rollover. 2004 SAE World Congress, No. 04-Annual-848, Detroit, MI, March 2004 (Book SP-1869, paper number 2004-01-1757).

Martens JD. Lyapunov-based, on-line identification for backstepping control. Department of Electrical Engineering and Computer Science, Ph.D. Dissertation, Cleveland, OH, Case Western Reserve University, 2000.

Martens JD, Newman WS. Stabilization of a mobile robot climbing stairs. 1994 IEEE Proceedings and IEEE Video Proceedings of the International Conference on Robotics and Automation, San Diego, CA, p. 2501-2507, May 1994.

Martens JD. Enhanced teleoperation of a mobile robot. CAISR Technical Report #93-111, Master's Thesis, Case Western Reserve University, 1993.

## **Doctoral Thesis**

Martens JD. Lyapunov-based, on-line identification for backstepping control. Case Western Reserve University, Cleveland, OH, 2000.

## **Project Experience**

### **Systems and Controls**

Dr. Martens has over 25 years of experience specifying, designing, constructing, and analyzing control systems. A representative sampling of projects is listed below. These projects have involved control systems for products, processes, and machines ranging from office equipment to industrial processes with project scopes ranging from design and design reviews to accident investigation and failure analysis. Control systems generally consist of sensors, controllers, and actuators and Dr. Martens' work in design and analysis of control systems has ranged from detailed reviews of individual components to analysis of complex integrated systems.

### **Control Systems for Products**

- Academic test grading system: evaluated control system for an academic test grading system (card scoring) used in schools to determine potential issues with ability to read scoring sheets.



- Automatic racquetball serving machine: designed and constructed an automatic racquetball serving machine with variable speed and pitch.
- Automatic revolving and sliding doors: analyzed control system for their potential role in various accidents related to automatic doors.
- Automotive antilock brake system: analyzed control system for antilock brakes and compared operation to industry standards and practices.
- Automotive stability control: designed, implemented, and obtained patents on several vehicle stability, rollover, and steering control methods.
- Business card scanner accuracy: analyzed accuracy of control system used to scan business cards and perform optical character recognition.
- Computer-controlled telephone answering machine: designed and constructed a computer-controlled telephone answering machine, including interface circuitry and programming.
- Computer hard disk drive control method: analyzed control algorithm for head seeking and compared to teachings of a patent.
- Electric rear steering for automotive applications: designed and implemented control algorithms for electric rear steering to improve safety and performance of automotive systems.
- Electrically-powered four-wheel recreational vehicles: analyzed control system for electrically-powered four-wheel recreational vehicles that were experiencing faults and evaluated potential solutions.
- Espresso machine temperature control system: designed and constructed an analog temperature control system for an espresso machine.
- Hand-activated liquid dispenser: analyzed electronics and control system for an automatic soap dispenser.
- Home automation and security control system: designed, constructed, and programmed a home automation and security system with internet-based access.
- Hospital-grade sterilizer accident: analyzed control system for a hospital-grade sterilizer, reviewed incident data, and performed testing to evaluate control system responses.
- Ice maker system fires: analyzed control system for commercial ice making machines that were experiencing fires.
- Microprocessor-based robotic paint nozzle controller: analyzed and redesigned a paint head controller for an automatic robotic painting machine.
- Microprocessor-based stepper motor controller: designed and constructed a stepper motor controller, including power electronics and controller logic.
- Mobile robot control: retrofitted OEM control system with multi-processor based control system for automatic stair climbing.
- Oven controls: analyzed oven control systems to determine potential mechanisms for faulty burner operation.
- Paint dispensing control method: analyzed control system method for achieving high accuracy color paint dispensing and compared to teachings of a patent.
- Paper shredder control: analyzed and tested anti-jam algorithms for commercial office paper shredder.
- Sonar sensor-based control system for mobile robotics: designed and constructed a sonar sensor hardware driver and control system to perform obstacle avoidance for a mobile robot.
- Variable low-speed feedback controller for radio control car: designed and constructed PWM-based feedback velocity controller for low-speed (crawl speed) control of radio control car and interfaced to computer control system.
- Vision-based mobile robot tracking control system: designed and constructed multi-processing control system to use real-time vision processing for object tracking.
- Waterbed temperature control system: designed and constructed an analog temperature control system with discrete over-temperature control for water bed temperature regulation.

### **Control Systems for Processes**

- Gas burner for thermal oxidizer safety consulting: analyzed control system implementation for several thermal oxidizer burners and advised client on safety considerations.
- Grain processing facility fire: analyzed the role of the control system in an accident involving the processing of grain.

- Grain storage facility fire: analyzed the role of the control system in an accident involving the storage of grain.
- Incinerator control system safety analysis: analyzed the control system for an inert-atmosphere incinerator and developed list of considerations.
- Incinerator explosion: analyzed the control system for an inert-atmosphere incinerator that experienced an explosion.
- Laminator treating system explosion: analyzed process data and control system for an industrial, continuous processing, board laminating process.
- Natural gas and pulverized coal boiler explosion: analyzed the process data and logic for the burner management and combustion control systems for an industrial boiler that experienced an explosion.
- Nuclear control rod height control system: evaluated rod height control system in a nuclear power plant to determine potential failures.
- Phenol processing plant fire: analyzed control system response to a power outage at phenol processing plant.
- Pulverized coal, gas, and stoker boiler safety consulting: analyzed control system implementations for several pulverized coal, gas, and stoker boilers and advised clients on safety considerations.
- Sheet roll treating facility: analyzed control system for a sheet roll treating system involved in an explosion to determine sequence of operation.
- Steam-powered generator explosion: analyzed the control system response to an out-of-normal condition that led to an explosion at a power generating station.
- Steel processing plant fire: analyzed the control system used to process steel at a facility that experienced a major fire.
- Train monitoring and control system: analyzed control systems including Human Machine Interfaces (HMIs) used for monitoring and controlling a commuter rail system that experienced a collision.
- Underground salt cavern gas storage facility accident: analyzed control system and historic process data to determine storage capacity and production rate for a natural gas storage facility.
- Water treatment facility flood: analyzed control system response when a downstream valve lost communication with the control system for the main processing facility.
- Wonderware Data Analysis: evaluated historic Wonderware data to determine various operating conditions for plant operation.

### **Control Systems for Machines**

- Airplane service lift accident: analyzed the control system for a service lift that damaged the wing of a commercial airplane.
- Amusement park ride stoppage investigation: investigated the design of a drive control system for a Ferris wheel that experienced a stoppage.
- Brick palletizing station accident: analyzed the control system for an industrial brick palletizing control system in which a worker was injured when the machine was put into motion.
- Continuous miner control system: evaluated control system and associated remote control for a continuous miner involved in an injury.
- Continuous long-wall miner: analyzed control system and available process data for a continuous long-wall miner involved in a fatal mining accident.
- Crane control system: analyzed crane control system for potential faults that could lead to unexpected motion.
- Elevator control system: evaluated control system that had experienced flooding to determine potential problems associated with water intrusion.
- Height Control Module (HCM) performance test system: designed, constructed, and programmed functional test system for automotive automatic leveling Height Control Modules (with Tech 2).
- Industrial press control system accident: analyzed control system for an industrial press in which a worker was injured.
- Lyophilizer accident: analyzed control system and Human Machine interface (HMI) and historic process data for a pharmaceutical freeze-dryer that exploded.
- Mining shuttle car drive analysis: evaluated performance of DC drive for a shuttle car.
- Remote control for construction equipment: analyzed remote control system for construction equipment

to determine if potential faults could lead to unexpected motion.

- Remote control for lift system: analyzed remote control system for a lift for potential faults that could lead to unexpected motion.
- Scissor lift accident: analyzed hard-wired control system including sensors for a lift involved in a tip accident.
- Speed detection and control system for fan clutch test system: designed and constructed a speed detection and control system for audit and performance testing for fan clutches.
- Sports lighting control system failures: analyzed control systems for remote-controlled sports lighting equipment when manufacturer was experiencing unacceptably high failure rates.
- Vision-based robotic laser cutting control system: developed control system to perform laser cutting of materials and vision-based verification of parts.
- Vertical lathe accident: evaluated control system and available data in machine to determine potential accident scenarios.
- Wiper audit and performance test stand: programmed a multi-station automotive wiper testing system to exercise wiper motors and collect data.

## **Electronics and Circuitry**

Dr. Martens has over 25 years of experience specifying, designing, constructing, and analyzing digital and analog electronic circuits for a variety of applications including sensing, control, battery charging, radio control, electromechanical interfacing, and embedded systems. Many of the projects listed above include electronics and circuitry evaluation. An additional representative sampling of projects related to electronic circuits is listed below.

- Analog and digital interface circuitry for personal computer: designed and constructed specialized input/output interfacing circuitry to provide full optical isolation.
- Battery charging circuitry: designed, constructed, reviewed, and analyzed battery charging and battery-powered circuits for various battery chemistries and applications.
- Burn hazard analysis: analyzed various devices for potential to cause burns.
- Car audio equalizer system: designed and constructed a multi-band equalizer system for audio application.
- Custom LED-based encoder for mobile robot actuators: designed and constructed a custom encoder system for articulating mobile robot.
- dSPACE interface electronics: designed and constructed isolation and interface circuitry for automotive instrumentation.
- Failure Mode and Effects Analysis: employed FMEA and other techniques to evaluate the reliability of various circuits and systems.
- Fan clutch speed monitoring circuitry: designed and constructed an optical counting and speed detection system for measuring speed of fan clutches in test system.
- Home security system: designed and constructed a web-enabled security system for monitoring and controlling sprinkler system, lights, garage door, and security.
- Industry Standard Architecture (ISA)-based Analog-to-Digital, Digital-to-Analog, and Digital Input/Output data acquisition and control board: designed and constructed a multi-channel input/output data acquisition and control board.
- Interface circuitry for radio control car to Versa Module Europa (VME)-based multiprocessor system: designed and constructed circuitry to interface input/output boards to radio control system.
- Medical devices: analyzed various battery-operated medical devices for potential single-point failures that could create potential ignition sources during ethylene oxide sterilization.
- Optical sound transmission: designed and constructed a transmitter and receiver system for transmitting sound using light.
- Portable VME-based multiprocessor system and power electronics for autonomous mobile robot: retrofitted a teleoperated mobile robot with multi-processor-based system.
- Power electronics and electromechanical device interfaces to control audio equipment using personal computer: designed and constructed an electromechanical interfaces to control audio equipment using computer control.



- Printed Circuit Board (PCB) Failure: evaluated and tested printed circuit boards and components for failure for a variety of applications.
- Radar detection circuitry: designed and constructed a radar detection system for automotive application.
- Radio control transmitter/receiver link w/ DTMF (Dual-Tone Multi-Frequency) transmission: designed and constructed radio control transmitter and receiver system to interface to computer.
- Real-Time Damping module performance test stand: designed and constructed a customizable, multi-channel control and data logging system to test various generations of RTD control modules.
- Sixteen-channel, computer-controller nichrome heater system: designed and constructed a power amplifier/driver for computer-controlled heating system.
- Wave generator: designed and constructed a custom multi-frequency sine-wave generator and special timing circuitry for MTS test equipment.
- Wiper delay circuitry for automobile: designed and constructed an adjustable automotive wiper delay system.



## **KRISTA F. HOLT**

### **Managing Director**

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**Krista Holt** is a Managing Director at Econ One Research, Inc. (“Econ One”). Econ One is a national research and consulting firm with experience in a wide variety of practice areas, including antitrust, damages, employment, energy, health care, intellectual property, international arbitration, statistical analysis, and valuation.

Ms. Holt testifies as an economic damages expert, marketing expert, survey expert and licensing expert. She provides consulting and expert witness testimony for issues related to patent, trademark, trade secret, antitrust, copyright, breach of contract and false advertising, including strategic consulting, valuation, marketing, licensing, surveys, liability, class certification and analysis of damages claimed in litigation and other issues, including lost profits, reasonable royalties, price erosion, accounting of defendant’s profits, restitution, domestic industry, bonding, corrective advertising, discounting, and diminution in asset and enterprise value.

Ms. Holt draws on her experience in intellectual property litigation, surveys, marketing, valuations and licensing which enhance the quality and credibility of her forensic analyses. She has provided services including expert testimony for economic damages, surveys, marketing, valuation, licensing and consulting in over two hundred intellectual property cases.

Prior to being a Managing Director at Econ One, Ms. Holt served as the President and CEO of GreatBridge Consulting, Inc. Founded by Ms. Holt in 2012, GreatBridge was a national consulting firm specializing in economic damages, surveys, marketing, valuation, licensing and litigation support services for intellectual property, antitrust, commercial damages, class action, and business consulting. Prior to founding GreatBridge Consulting, Ms. Holt founded and managed the Intellectual Property practice for The Kenrich Group and was a Vice President for the firm. Prior to becoming a Vice President for The Kenrich Group, Ms. Holt was a Managing Director for Ocean Tomo and founded and led the firm’s Washington DC Expert Testimony Practice and the firm’s national Survey Practice. Prior to its acquisition by Ocean Tomo, Ms. Holt was a Senior Consultant for Tait Advisory Services’ Intellectual Property Practice and founded and led their Survey Practice. Before becoming an intellectual property consultant in 2001, Ms. Holt worked for eleven years in industry accounting and marketing management for companies including Western Express, Inc., Salvucci Engineers, Inc. and InterMedia Marketing. She served as the most senior financial personnel (Controller) for two companies and as Director of Marketing for a third. Ms. Holt is an active member of the American Bar Association, Intellectual Property Owners Association, International Trademark Association, National Association of Certified Valuators and Analysts and Licensing Executives Society. She was the Chair of the LES Valuation and Taxation Committee. Ms. Holt is also a Certified Licensing Professional and an Accredited Valuation Analyst, and is an instructor for the Certified Licensing Professional program. She has lectured on a variety of intellectual property topics for the American Bar Association, Licensing Executives Society, IPI, DRI, Harvard Law, George Washington Law and various other organization and universities.

Ms. Holt has provided services including expert testimony, marketing, surveys, valuation and consulting, as well as other services for a wide range of industries, including evaporative condensers, refrigeration and HVAC, medical devices, pharmaceuticals, casinos, online gaming, radio frequency spectrum, automotive manufacturing, food packaging, beverage containers, advertising, social media platforms, toys, athletic equipment, social media, computer software, cloud services, designer goods,

computer servers, medical laboratory equipment, sinkhole equipment, automotive additives, gateways, network switches, surgical equipment, drug stores, office supplies, online advertising, DVD equipment, oil additives, biotechnology, tobacco, construction equipment for excavation, internet technology, voice transcription, clothing, trucking, waste collection, financial services, insurance, telecommunications, semi-conductors, blood banks, real estate, industrial products, space exploration, chemical coatings, athletic apparel, investment banking, hospitality, stents, navigation systems, medical supplies, sporting equipment, televisions, aircraft parts, quick serve restaurants, engineering, packaged food, renewable biofuels, automotive aftermarket, professional services, bar code technology, cell phone technology, mattresses, fabrics, computer technology, voice recognition, visual arts, banking, produced TV episodes, sporting goods, garden ornaments, plastic packaging materials, retail and wholesale consumer products, distilled spirits, washroom accessories, educational products, agriculture, consumer electronics, religious organizations, broadcasting, terrestrial engineering, enterprise content management and national defense. She has testified on issues informing economic damages, valuation, marketing, licensing, lost profits, reasonable royalties, competition, discounting, most favored nation clauses, price fixing, domestic industry, bonding, industry trends, surveys for intellectual property, antitrust and competition, commercial damages and complex litigation, class action and management practices.

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**PRINCIPAL  
EXPERIENCE**

*Econ One Research, Inc.*  
Managing Director, 2017 to Present

*GreatBridge Consulting, Inc.*  
President & CEO, 2012 to 2017

*The Kenrich Group, LLC*  
Vice President, 2009 to 2012

*Ocean Tomo, LLC*  
Managing Director, 2008 to 2009  
Director, 2004 to 2008  
Associate, 2003 to 2004

*Tait Advisory Services, LLC*  
Senior Consultant, 2002  
Consultant, 2001 to 2002

*Western Express, Inc.*  
Controller, 2001

*Salvucci Engineers, Inc.*  
Controller, 1999 to 2000

*Gold, Khourey & Turak, LLC*  
Office Manager and Accountant, 1994 to 1997

*Fitzpatrick Floor Coverings*  
Marketing Consultant, 1993

*InterMedia Marketing*  
Director of Marketing, 1991  
Senior Account Executive, 1990  
Account Executive, 1989

Sara Lee  
Cost Analyst, 1988

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**EDUCATION** University of Louisville, Master of Business Administration. Graduated 2004.  
Beta Gamma Sigma

Wake Forest University, Bachelor of Arts in Psychology. Graduated 1989.  
Cum Laude

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**ACTIVE MEMBERSHIPS** Licensing Executives Society  
American Bar Association  
Certified Licensing Professionals  
National Association of Certified Valuators and Analysts  
International Trademark Association  
Intellectual Property Owners Association

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**EXPERT TESTIMONY LAST 5 YEARS** *AVCO Corporation v. Turn and Bank Holdings, Inc. and Precision Airmotive, LLC v. AVStar Fuel Systems, Inc.*  
U.S. District Court, Middle District of Pennsylvania  
Deposition

*FastShip, LLC v. United States Of America*  
U. S. Court of Federal Claims  
Trial

*Norvax, LLC d/b/a GoHealth v. Access Clinical Partners, LLC d/b/a GoHealth Urgent Care*  
U.S. District Court, Southern District of New York  
Deposition

*Arrowpoint Capital Corp. v. Arrowpoint Asset Management, LLC et al.*  
U.S. District Court, District of Delaware  
Deposition

*Louisville Marketing, Inc. v. Jewelry Candles, LLC*  
U.S. District Court, Western District of Kentucky, Louisville Division  
Deposition

*Bell Helicopter Textron Inc. v. Eurocopter*  
U.S. District Court, District of Columbia  
Deposition and Hearing

*In the Matter of Certain Navigation Products, Including GPS Devices, Navigation and Display Systems, Radar Systems, Navigational Aids, Mapping Systems, and Related Software*  
U.S. International Trade Commission, Washington, DC  
Deposition

*180s Inc. v. Costco Wholesale Corporation and SM Global*  
U.S. District Court, District of Maryland, Baltimore Division  
Declaration and Hearing

*OpenRisk, LLC v. Microstrategy Services Corporation*  
U.S. District Court, Eastern District of Virginia, Alexandria Division  
Deposition

*Open Text S.A. v. Box, Inc.*  
U.S. District Court, Northern District of California, San Jose Division  
Deposition

*Battle Toys, LLC v. LEGO Systems, Inc.*  
U.S. District Court, District of Delaware  
Deposition

*R. Edward McGhee and Mega Corporation v. Phillip G. Greer and Stephen H. Pottinger*  
Commonwealth of Kentucky, Fayette Circuit Court, Civil Branch 8<sup>th</sup> Division  
Deposition

*Tria Beauty, Inc. v. Radiancy, Inc.*  
U.S. District Court, District of Northern California, San Francisco Division  
Deposition

*Pure Fishing, Inc., v. Normark Corporation*  
U.S. District Court, District of South Carolina, Columbia Division  
Deposition

*Bobrick Washroom Equipment, Inc. v. American Specialties, Inc.*  
U.S. District Court, Central District of California, Western Division  
Deposition

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**PUBLICATIONS**

“What’s It Worth? Principles of Patent Valuation,” [ABA-IPA Landslide Magazine](#), Volume 8, Number 1, September/October 2015, Thomas B. Herman, Brian P. O’Shaughnessy, co-authors

“Chasing Moseley’s Ghost”, [The Trademark Reporter](#), Volume 98, Number 6, November - December 2008, Scot Duvall, co-author

“What Patent Lawyers Can Learn from Trademark Law: The New Use of Surveys in Patent Litigation”, [IPL Newsletter](#), A Publication of the ABA Section of Intellectual Property Law, Volume 24, Number 3, Spring 2006, Michael Milani, John Mallonee, co-authors

“Surveys in Patent Infringement Litigation: The Next Frontier”, [Patent Strategy & Management](#), Volume 6, Number 12, May 2006, Michael Milani, John Mallonee, co-authors

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**SELECTED  
PRESENTATIONS**

Presentation: Litigation Counsel of America, Intellectual Property Institute (IPI), "Apportionment of Patent and Copyright Damages"  
September 14, 2017, Louisville, KY

Presentation: WIIT, "Addressing Trade Secret Misappropriation in the International Context"  
September 13, 2016, Washington, DC

Presentation: Tech Transfer Central, "Proper Calculation of Apportionment and Entire Market Value in University Patent Licenses"  
February 25, 2016, Webinar

Presentation: ABA Center for Professional Development, "What's it Worth? Principles of Patent Valuation"  
October 20, 2015, Washington, DC

Presentation: Litigation Counsel of America, Intellectual Property Institute (IPI), "Apportionment of Defendant's Profits for Trademark and Copyright Damages"  
January 23, 2015, Key Largo, FL

Presentation: Litigation Counsel of America, Intellectual Property Institute (IPI), "The Role of Surveys in Damages Calculations for Intellectual Property"  
May 3, 2014, Los Angeles, CA

Presentation: "Patent Infringement: Proving Royalty Damages, Leveraging EMVR, Apportionment, Alternatives to the 25 Percent Rule, and Royalty Stacking"  
May 23, 2013, Washington, DC

Presentation: 28<sup>th</sup> Annual Intellectual Property Law Conference, "Hot Topics in Patent Damages: Deconstructing Apple v. Motorola Should The Federal Circuit Revisit Its Precedents on Past Damages?"  
April 3, 2013, Washington, DC

Presentation: ABA -Section of Litigation, IP Litigation Committee, Trademark and Copyright Subcommittees, "Confused About Damages and Trademark or Copyright Claims?"  
November 15, 2012, Webinar

Presentation: Licensing Executives Society, "Patent Damages: Recent Cases, Use of Surveys and Antitrust Issues"  
October 10, 2012, Webinar

Presentation: Licensing Executives Society, "LES Valuation and Damages Course"  
June 23, 2011, Washington, DC

Presentation: American Bar Association – Intellectual Property Law Section,  
“Beyond Injunctions: Exploring Damages and Other Options for Relief in Trademark Litigation”  
June 10, 2011, Washington, DC

Presentation: Licensing Executives Society, “A New Look At Patent Damages After Uniloc, Lucent and i4i”  
March 2, 2011, Washington, DC

Presentation: DC Patent Lawyers Club, “A New Look At Patent Damages”  
December 1, 2010, Washington, DC

Presentation: IP Summit 2010, “Effective Use Of Damage Experts”  
October 2010, Mountain View, CA

Lecture: Harvard Law School, “Lanham Act, Trade Secret, and Copyright Damages”  
September 2009, Cambridge, MA

Lecture: Kent College of Law, “Lanham Act, Trade Secret, and Copyright Damages”  
November 10, 2008, Chicago, IL

Lecture: Harvard Law School, “Lanham Act, Trade Secret, and Copyright Damages”  
October 30, 2008, Cambridge, MA

Presentation: DRI, “Playing the Blues – Consumer Surveys in False Advertising Claims”  
October 24, 2008, New Orleans, LA

Presentation: Licensing Executives Society, “Licensing Practices Relevant to Antitrust”  
October 21, 2008, Orlando, FL

Presentation: DC Bar Association, “Intellectual Property as an Investible Asset: The Future of Buying and Selling Intellectual Property”  
October 14, 2008, Washington, DC

Presentation: The Dayton Intellectual Property Law Association, “Trends in Patent Litigation: Keeping Current on Damage Issues and Refocusing Discovery Efforts”  
September 12, 2008, Dayton, OH

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**CONTACT**

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(202) 769-4920 Facsimile  
kholt@econone.com

## Addenda 2: Curriculum Vitae of Marc Vanacht

### Education

1997-98: Executive Seminars: *Strategic Management of Information Technology* and *Managing Technology and Innovation* at the Stanford University Business School in California.

1974: Masters Degree in **Law**, University of Leuven, Belgium

1974: 'Graduaat' Degree in **Business Administration**, University of Leuven, Belgium

1971: Baccalaureus Degree in **Economy**, UFSIA University of Antwerp, Belgium

1971: Baccalaureus Degree in **Philosophy**, UFSIA University of Antwerp, Belgium

### Publications

Marc Vanacht, *Status of Agriculture in the World, and Perspectives of Science and Technology in the Future*, 113 J. Japan Soc. Mech. Eng. 512-517 (2010)

Marc Vanacht, *Brief Introduction to the Mechanization of Rice Production in the United States*, Agricultural Science and Technology Promotion (2010)

Marc Vanacht, *How Will Cattlemen Deal With the Future*, Range Beef Cow Symposium 55 (2003)

### Research

**1991 - Ongoing:** Marc Vanacht is recognized worldwide as a leader in the area of precision agriculture. This is reflected in many consulting assignments, and in the very many speeches he gives in the matter at international conferences in the USA, Europe and Asia

**1996 - Ongoing:** Many consulting assignments of AG Business Consultants involve aspects of research and development. These projects however are covered under confidentiality agreements and may not be disclosed. One might look at the list of clients and public speeches to understand the breadth of areas covered.

**1992 - 1996:** At Monsanto, Marc Vanacht headed a team that developed software applications and product concepts to support Precision Agriculture. This led to several patents in the USA, with extensions in other world areas:

- United States 5566069 - Computer network for collecting and analyzing agronomic data (1996-10-15)
- United States 5699244 - Hand-held GUI PDA with GPS/DGPS receiver for collecting agronomic and GPS position data (1997-12-16)
- United States 6064943 - Computer network for collecting and analyzing agronomic data (2000-05-16)

Monsanto exercised the patents for several years, and then donated the Intellectual Property to the University of Illinois for use by the agricultural community.

**1994 - 95:** Member of the team that launched 'Agriculture.com', one of the very first websites dedicated to agriculture.

**1983 - 87:** As Product Manager, Marc Vanacht coached teams of chemists and agronomists at Monsanto Europe to develop new agricultural use applications, product formulations and



product mixtures related to Roundup herbicide. This effort also included getting regulatory approval from national and European agencies.

**1974:** Master's Degree in Law with a thesis: Responsibility and Liability of the Tour Operator, University of Leuven Law School, Belgium

## **Career History**

### **AG Business Consultants**

A strategic agribusiness consulting firm.

**Managing Partner, Specialty: IT in agriculture, energy crops, traceability and supply chain, 2001 to present.**

Mr. Vanacht provides strategic consulting services to global companies, government agencies, universities and farmers' organizations regarding the impact of new and future technologies. His focus is currently on precision agriculture, traceability and supply chain.

**Partner, Specialty: efficiency improvements, 1996 to 2001.**

Earlier in his consultancy, Mr. Vanacht specialized in Precision Agriculture, the use of IT and GPS to improve farmers' efficiency. He redirected his focus to keep in step with emerging technology and the changing marketplace.

### **Monsanto Company US**

**CEO, Infielder, 1994 to 1996.**

Mr. Vanacht was instrumental in the startup of this division focused on developing and marketing software and information service solutions to farmers and agricultural distributors. The project received wide exposure in the computer, communication and agricultural press and was finalist in the 1996 Computerworld Smithsonian Awards. It also received the 'Best of Show' Award of the Midwest Chapter of the National Agricultural Marketing Association. Monsanto subsequently 'internalized' the project, using the acquired knowledge for its own competitive advantage.

**Innovation Team, Monsanto Company US, 1991 to 1994.**

Infielder was one of the many ideas to come out of the Innovation Team. Mr. Vanacht was a key member of the Team that reported directly to the CEO. The Team developed ideas for new business areas, generating more than 500 ideas, of which four were explored, three internalized, and one was tested as a separate startup (Infielder).

### **Monsanto Company Europe/Africa**

Manager, Strategy & Business Development, 1987 to 1991.

Roundup Product Manager, 1983 to 1987.

Marketing Manager France, 1980 to 1983.

Marketing Manager Spain, 1979 to 1980.

Advertising Manager, 1976 to 1979.

## **SSC&B Lintas**

Account Executive, 1975 to 1976.

## **Conferences and Workshops**

### **2017**

Conference on Advanced Agriculture in Shizuoka Prefecture, Numazu City, Japan

International Forum on Agricultural Aviation, Beijing China

InfoAg 2017, St Louis, MO

Side Meetings of AgInnovation Showcase. St Louis, MO

Nercita Symposium, Changchun, China

ACPA, Hamilton, NZ!)

### **2016**

Kennewick Conference on Advanced Agriculture Technologies, Kennewick, WA

Seminars at Katholieke University Leuven, Belgium

### **2015**

Seminars at Katholieke University Leuven, Belgium

InfoAg 2015

ICGAI Conference, Yogyakarta, Indonesia

ILGISA (Illionois GIS Association) Conference, Springfield, IL

8 ISIITA symposium, Beijing, China

Congres de l'Ordre des Agronomes du Quebec, Montreal, Canada

6 ACPA (Asian Conference on Precision Agriculture), Guangzhou, China

Farmer to Farmer, FBN Annual Meeting, Quad Cities

### **2014**

Tools of the Future Days, Organized by Successful Farming Magazine

12 ICPA, International Conference on Precision Agriculture, Sacramento, CA

InfoAg 2014

ISTPA Symposium, Beijing & Heilongjiang, China

CIGR Conference, Beijing, China

### **2013**

5 ACPA, Asian Conference on Precision Agriculture, Jeju Island, Korea

InfoAg 2013,

Symposium on Intelligent I.T. in Agriculture, Beijing, China

Green Agro Industry Conference, Yogyakarta, Indonesia

## **2012**

AgEng (European Agricultural Engineering Conference) Valencia, Spain

11 ICPA (International Conference on Precision Agriculture), Indianapolis, IN

Soil & Water Conservation Society Annual Meeting, Fort Worth, TX

Symposium for the 80th birthday of Academician Prof. Wang Mahoa, Beijing, China

## **2011**

Asian Conference on Precision Agriculture, Obihiro, Hokkaido, Japan

InfoAg Conference, Springfield, IL

Soil & Water Conservation Society Annual Conference, Washington DC

International Conference for Agro-Tourism Development (ISAD), Yogyakarta, Indonesia

## **2010**

AgConnect Expo 2010, Orlando, FL

International Conference on Precision Agriculture, Denver, CO

Advanced Technologies for Rice Growing, Guangzhou / Huizhou, China,

Wireless Sensor Networks Conference, Beijing China

## **2009**

Joint International Agricultural Conference (JIAC) and Third Asian Conference on Precision agriculture (3ACPA), Beijing, P.R. China

SPACE 2009 Conference, Rennes, France

Engineering for Speciality Crops Workshop, Wilsonville Oregon, USA

InfoAg 2009 Conference, Springfield, IL, USA

Oil and Oilseed Innovation Asia Conference 2009, Beijing, P.R. China

FRUTIC09 Conference on Technologies in Fruit and Vegetables, Concepcion, Chile

Missouri Natural Resources Conference (MNRC) 2009, Osage Beach, MO, USA

CeBit Technology Conference and Fair, Hannover, Germany

## **2008**

9th International Conference on Precision Agriculture, Denver, CO, USA

Annual Conference of the American Society of Agricultural and Biotechnological Engineers (ASABE), Providence, RI, USA

Meeting of the Faculty Deans and Laboratory Directors of Agricultural Universities in China, Baoding, P.R. China

Workshop on Autonomous Navigation of Agricultural Equipment, Guangzhou, P.R. China

Business Forum of the Hokkaido Food Industry, Sapporo, Japan

International iBio Conference on Industrial Biotechnology, Hangzhou, P.R. China

Workshop on new concepts in agriculture food, Kyoto University, Japan

Workshop on Precision Agriculture, Obihiro Agricultural University, Obihiro, Japan

Closing Conference of the PreAgro Public Private Research Partnership on Precision Agriculture, Berlin, Germany

Launch of a New Branded portfolio of Fresh vegetables by Daimaru Retailer, Urawa, Saitama, Japan

Workshops on New Technologies in Agriculture, Zhejiang University, Hangzhou, P.R. China

## **2007**

Second Asian Conference on Precision Agriculture, PyeongTaek, Korea

Bi-Annual Conference of the Chinese Society of Agricultural Engineering, Daqing, P.R.China

Quality Control in Food Packing, Ehime University, Matsuyama, Japan

InfoAg 2009 Conference, Springfield, IL, USA

## **2006**

John Airy Beef Cattle Symposium 2006, Kansas City, MO, USA

Workshop on Alternative supply chains for groceries, Tokyo University of Agriculture and Technology, Tokyo, Japan

The Future of Beef Cattle Breeding, University of Arkansas, Fayetteville, AR, USA

The Future of the meat value chain, Arkansas Farm Bureau Annual Meeting, Hot Springs, AR, USA

## **2005**

InfoAg MidSouth, Tunica, MS, USA

AgrowKnowledge Annual Meeting, Ventura, CA, USA

InfoAg 2005 Conference, Springfield, IL, USA

First Asian Conference on Precision Agriculture (FACPA), Toyohashi City, Japan

CAPCA (California Association of Pest Control Advisors) Annual meeting, Reno, NV, USA

## **2004**

Symposium of the National Center for Manure Management, New Orleans, LA, USA

Dekalb Farm Bureau Annual Meeting, Dekalb, IL, USA

7th International Conference on Precision Agriculture, Bloomington, MN, USA

ESTeC Conference, Tokyo, Japan

CAPCA (California Association of Pest Control Advisers) Annual Meeting, Anaheim, CA, USA

## **2003**

National Tree Fruit Technology Roadmap Workshop, National Conference Center, Leesburg, VA, USA

Honjo City Precision Farming Association, Honjo City, Japan

Toyohashi City Precision Farming Association, Toyohashi City, Japan

Tokyo University of Agriculture and Technology, Fuchu, Japan

ESTeC Conference, Multi-disciplinary Collaboration toward a Bio-mass Oriented Society, organized by the Japanese Ministry of Science and Education, the Japanese Ministry of Agriculture and Fisheries, & Tokyo University of Agriculture and Technology, Tokyo, Japan

4ECPA, Fourth European Conference on Precision Agriculture, Berlin, Germany

InfoAG 2003 Conference, Indianapolis, IN, USA

EurepGAP Conference, Towards Global Harmonization of Food Safety and Quality, Madrid, Spain

US Midwest Biotechnology Mission to the Kansai Region in Japan (Osaka, Kobe, Kyoto)

Washington State Horticultural Association Annual Meeting, Wenatchee, WA, USA

The Range Beef Cow Symposium XVIII, Scottsbluff, NE, USA

## **2002**

International Conference on Precision Agriculture, Bloomington, MN, USA

Workshop on Precision Agriculture, Ghent, Belgium

## **2001**

University of Hokkaido, Sapporo, Japan

National Agricultural Research Center, Tsukuba, Japan

Institute of Agricultural Machinery, Ohmiya, Japan

Hokuriku Research Center, Niigata, Japan

“Les Cultureles” National Agricultural Show, Boigneville (Fontainebleau), France

European Conference on Precision Agriculture, Montpellier, France

InfoAg Conference, Indianapolis, IN, USA

International Conference on Geospatial Information in Agriculture and Forestry, Denver, CO

## **2000**

Conservation Technologies Information Center (CTIC) Forum on GMO Crops, Colorado Springs, CO, USA

Soil and Water Conservation Society Annual meeting, St. Louis, MO, USA

International Conference on Precision Agriculture, Bloomington, MN, USA

Workshop on Traceability at the SIAL International Food Conference, Paris, France

Creating Digital Dividends Conference, Seattle, WA, USA

## **1999**

International Conference on Geospatial Information in Agriculture and Forestry, Orlando, FL, USA

Workshop on Precision Agriculture and the Environment, Nebraska City, NE, USA

InfoAg Conference, Indianapolis, IN, USA

Business Geographics Conference, Chicago, IL, USA

## **1998**

International Conference on Geospatial Information in Agriculture and Forestry, Orlando, FL, USA

Briefing to The World Bank and the CTIC, West Lafayette, IN, USA

Workshop on Data Confidentiality, Nebraska City, NE, USA

International Conference on Precision Agriculture, St Paul, MN, USA

## **1995-97**

PDA Forum, San Jose, CA, USA

InfoAg Conference, Champaign Urbana, IL, USA

National Wheat Growers Association Annual Leadership Meeting, Big Sky, MT, USA

Colorado Wheat Growers Association Annual Meeting, Denver, CO, USA

InfoAg Conference, Champaign Urbana, IL, USA

## **1994**

NetWorld + Interop, Las Vegas, NV, USA

Forrester Technology Forum, Boston, MA, USA

COMDEX Fall, Las Vegas, NV, USA

## **Consulting**

### **Animal Agriculture and the Environment**

John Airy Beef Cattle Symposium 2006, Kansas City, MO, USA

National Center for Manure Management, 2004, New Orleans, LA, USA

The Range Beef Cow Symposium XVIII, 2003, Scottsbluff, NE, USA

Presentation of the Final Report of the European MATRESA (MANure Management, TREATment Strategies for Sustainable Agriculture) study group, 2003, Silsoe Research Institute, UK

Market assessment of odor abatement products, technologies and procedures for intensive animal feeding operations (mostly hogs and beef), USA

Study tour in Europe about technologies to process manure into energy and environmentally acceptable by products (mostly dairy)

Market assessment of bio processing and value enhancement of manure and offal of meat processing plants (mostly poultry and hogs), USA

Study of manure management practices at a leading hog breeder / processor (PSF), USA

### **Industry Trends**

Belgian Association of Horticultural Cooperatives & Auction Houses, Belgium

CAPCA, California Association of Pest Control Advisors, USA

Dekalb County (IL) Farm Bureau Association, USA

Illinois Agricultural Leadership Foundation, USA

National Center for Manure Management, USA

Pioneer Hi-Bred, USA

USB (United Soybean Board), USA

US Department of Agriculture - Office of the Chief Information Officer, USA

Washington State Fruit & Horticultural Producers, USA

### **Corporate and Business Development**

Agrauxine, France

AEA (Agricultural Electronics Association), USA

EMI and Equipment Manufacturer's Institute), USA

ASPEX (Biotechnology arm of Asahi Glass) - Japan

Belchim, Belgium

Bilberry, France

CiAg Brazil

CNA Insurance, USA

EADS - DASA (Deutsche Aerospace) - Germany

Dow Agrosiences, USA

Ebara Corporation - Japan

Fujiwara Scientific Company - Japan

Growmark Cooperative, USA

HitachiSoft, Japan

Incotec, Netherlands

JACTO, Brazil

Japan Radio Co. Ltd. - Japan

Meredith Corporation – Successful Farming Magazine - [www.agriculture.com](http://www.agriculture.com)

Mosaic Fertilizer, USA

NewLeaf Symbiotics, USA

Octinion, Belgium

OMI Scales, Japan

Pivot - Australia

Porphyrio, Belgium

Shibuya-Ishii Seiko Corporation - Japan

Space Imaging, USA

Syngenta - Switzerland

VantagePoint Network, USA

Vito, Belgium

Wilbur Ellis Corporation, USA

Yamaha Motor (Agricultural) - Japan

Yanmar Agricultural Equipment - Japan

## **Economic Development**

Business France

CTIC (Conservation Technologies Information Center), USA

MSCI (Mississippi Space Commerce Initiative, includes NASA, The State of Mississippi and the University System of the State of Mississippi), USA

JETRO (Japan External Trade Organization), Chicago Office

The World Bank

Kansai Midwest Biotechnology Initiative (KAMBI)

U.S. Midwest Bio Mission to Osaka, Kobe and Kyoto

U.S. Midwest Bio Mission to Tokyo

## **National Roadmaps**

US Department of Agriculture – Agricultural Research Service: National Tree Fruit Technology Roadmap, USA

US Department of Agriculture - Natural Resources Conservation Service: Blue Ribbon Panel on Data Collection and Analysis, USA

US Department of Agriculture - Natural Resources Conservation Service: Task Force on Future Directions in Field Office Business Process Automation, USA

US Department of Agriculture - Natural Resources Inventory: Strategy for publishing the results of the 1997 Natural Resources Inventory, USA

US Department of Agriculture - National Agricultural Statistics Service: 1999 Leadership Conference, USA

Japanese Ministry of Agriculture: Roadmap for the development of Precision Agriculture Technologies for Japan



## **Precision Agriculture**

Context Consulting, USA

CORBANA (Corporacion Bananera Nacional) - Costa Rica

Iseki, Shibuya and Ishii Corporations (The three companies have now merged.) - Japan

ITCF (Technical Institute of Cereal and Forage Crops – Now called Arvalis) - France

Japanese Ministry of Agriculture – Agricultural Industries Enhancement Agency, Japan

Japanese Ministry of Agriculture – Institute of Agricultural Machinery, Japan

Monsanto Company - Spain

Monsanto - USA

Nissan Chemicals - Japan

Pioneer Hi-bred, USA

Purdue University, USA

Pivot - Australia

Simplot, USA

Tokyo University of Agriculture and Technology - Japan -

University of Ghent - Belgium

University of Leuven – Belgium

## **Honorary Consul**

Marc Vanacht is Honorary Consul of Belgium for the State of Missouri, based in St Louis.

The function has three responsibilities:

- Protocol when a Belgian member of government or VIP has official meetings with important people in Missouri

- Support and aid to Belgian citizens having temporary needs when traveling in Missouri (mostly temporary passports if/when papers are lost)

- Encourage and facilitate business (development) relations between Missouri based and Belgian companies.

The function is recognized by the King of Belgium, the Government of Belgium, the President of the USA, the US Department of State, the Diplomatic Security Service, the FBI and law enforcement and emergency services and agencies in Missouri and St Louis.