

Innovation 601

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**Two stories of Innovation
Corporative Prospective, Wi-LAN
University Prospective, TM Group @ NINT/UofA**

Group Members

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Outline , Wi-LAN

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- Case Study Selection Process
- What does Wi-LAN do?
- Company background
- Early stages financing
- Commercialization barriers
- Wi-LAN's business activities today
- Dr. Fattouche's Recommendations

Available Case Studies

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- YEDA Research and Development Co.,Ltd
- University of Alberta Spin-offs
 - BioMS Medical Corp
 - Isotechnika Inc.
 - Chinook Multimedia Inc.
 - Dynastream Innovations
 - L & R Wang Enterprises
- University of Calgary Spin-offs
 - Oncolytics Biotech Inc.
 - SagaTech Electronics Inc.
 - Wi-LAN

Founders of Wi-LAN

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Michel Fattouche, PhD



Hatim Zaghloul, PhD

Michel Fattouche, PhD

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- **Current Positions**
 - Professor at Electrical Engineering Dept., University of Calgary
 - CTO of Cell-Loc Location Tech. Inc.
- **Patents and Industrial Activities:**

Patents	Co-founded Company
W-OFDM	Wi-Lan (1993)
Super-Resolution	Cell-Loc Inc. (1995)
Electronic Foods for Weight-Loss	Electronic Dietary Food Inc. (2005)

Wi-LAN – Business Activities

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- “ Developing intellectual property
- “ Patenting inventions
- “ Harnessing the value of innovation

COMPANY



BOARD OF DIRECTORS



Jim Skippen
Chairman & CEO



Robert Bramson



Dr. Michel Fattouche



John Gillberry



Bill Jenkins
Chairman of the Governance and
Nominating Committee



Rick Shorkey
Chairman of the Audit Committee,
Lead Independent Director



Paul McCarten



Jim Roche

Commercialization – Wi-LAN's first steps

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1. **AGT**
 - Filed the first patent
2. **University of Calgary**
 - Investigation and filing the next patent
3. **UofC, University Technologies International (UTI)**
 - Financial support to patent the invention
 - “This is too much, we cannot prove it!!”
4. **Fred Rogers**
 - Birth of Wi-LAN company

Early Stage Financing

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- Third Party Experience
 - ✦ Fred Rogers as CEO and Financial Expert
- Governmental Grants
 - ✦ Provincial Government
 - ✦ Federal, IRAP (Industrial Research Assistance Program)
- Personal Assets and Private Investors
 - ✦ Family, Friends, Mortgages

Barriers and Solutions

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- **Cisco, Intel, Broadcom and Atheros**
 - Compete against Wi-LAN
 - Refused to license Wi-LAN's technology
- **Solution, New CEO: Jim Skippen**
 - Understanding the new technology
 - Strong background in law
 - His Good Reputation, Raised a lot of money
 - Lawsuit against the big competitors
- **Next Decision**
 - Don't compete! Focus on patents

Hidden Barrier, Businessmen

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- **Internal Barriers, Hiring wrong management**
 - Worth financial problems
 - Firing won't be easy!
- **Strategy for success, Hiring strong management**
 - Increased financial resources
 - Solving legal competition problems

Wi-LAN's Main Business Activities Today

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- Over thousands Patents
- Protecting Inventors from Big Companies
 - Purchasing new patented technologies
 - Patent Infringement Protection
- The top 100 companies on stock exchange

Wi-LAN's Current Challenges

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- Private vs. Institutional Investors
- Proxy Fights
 - Professionals vs. Inventors (as co-founders)
- Patent Selection Process
 - Inventive and Innovative!

Dr. Fattouche's Recommendations

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- Stick to one company
- Be close to standards
- Be Patient!
- Who is a good CEO?
 - Inventor, Businessman, Lawyer...
- “Licensing the Technology” or “Owning a Company”
- Your share of a company
- Hiring and Firing!

On the other side, TM Group

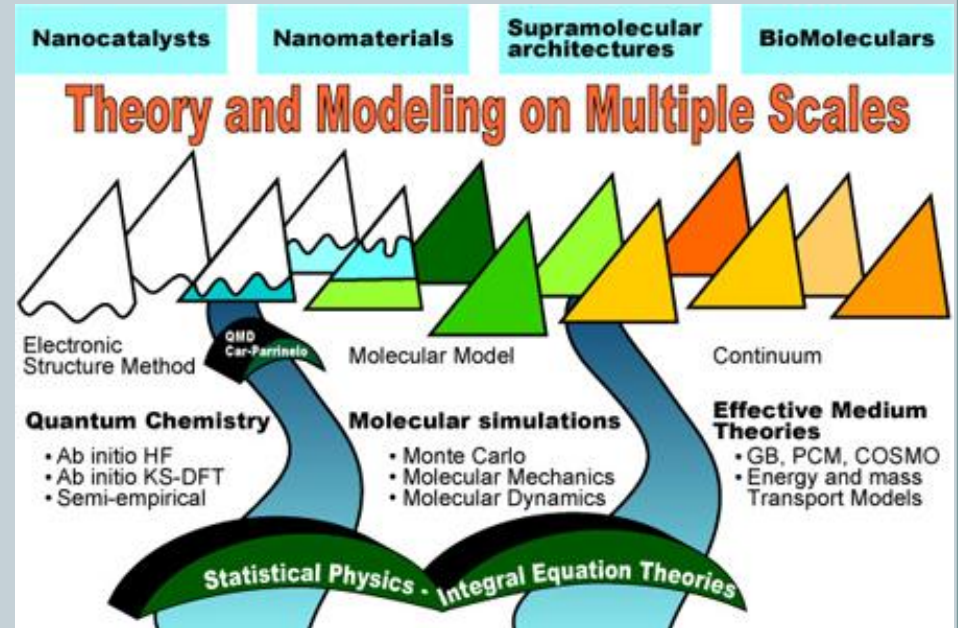
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- Innovation through the collaboration with industry
- To compete companies must do research and development
- Small companies can not afford R&D
- But even big companies need fundamental research
- Scientific modeling is an important part of research stage
- Companies need fundamental academic outsourcing

Theory and Modeling Group NINT/UofA

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- **Multi-scale modeling**
 - Molecular dynamics
 - Quantum mechanics
 - Nanocatalysis
 - And other
- **Theory development**
- **Software development**
- **Material design**



<http://www.cein.ualberta.ca/research/kovalenko/>

Corporate connections

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- Xerox
- Ballard
- Automotive fuel cell cooperation (AFCC)
- Centre for oil sands innovation (COSI)
- Scientific computing and modeling (SCM)

Corporate connections - Xerox

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- Focus - new polymer materials development
- Result – 4 patents
- What is not patented becomes Xerox trade secret
- Byproduct – new method
- Byproduct – publications

Corporate connections

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Ballard & AFCC

- Fuel cells
- Catalysis

COSI

- Bitumen upgrading
- Nanocatalysts rational design
- Financed by Imperial Oil

SCM

- ADF computational package
- AMBER molecular dynamics package

Pros and Cons

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- **Benefits for the University Group**
 - Financial support
 - Can hire more researchers (currently more than 20 in TM Group)
 - Patenting becomes Easier
- **Benefits for the Corporations**
 - Even small corporations can have benefits of scientific research
 - Fosters innovations
 - Cost efficient
- **Drawbacks**
 - Corporations are not interested in pure science
 - Trade secrets can not be published
 - Corporations are very specific on the choice of group's employees

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Questions?

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