

Knowledge Transfer

Sharing our strategies...

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Objectives

- * Facilitate and coordinate industrial collaboration
- * Activities to promote collaboration
 - workshops
 - meetings with industrial collaborators
 - Identify joint project opportunities,
 - etc.
- * Interface with university IP offices
 - With Managing Director work with BEACON universities' IP offices
 - Help negotiate intellectual agreements between universities and companies (NDAs, MOUs, etc.)
- * Launch an Industrial Affiliates Program
 - Outreach
 - Data sharing
 - Identification of synergistic research projects



Background

- * **Professor of Computer Science and Engineering**
- * **Research:**
 - Model-driven engineering of high-assurance adaptive systems
 - Harnessing Evolutionary Computation to support ULS
- * **20 years of industrial collaborations**
 - Ex: Eaton, Ford, GM, Texas Instruments, Motorola, General Dynamics, Siemens, IBM
- * **Different types of collaborations:**
 - Research (grants and contracts)
 - Term projects
 - Student fellowships
 - Faculty sabbatical
- * **Setting up IUCRC** (for Ultra-Large Scale Systems), Site Director
 - Multiple universities; multiple companies
 - Single IP agreement





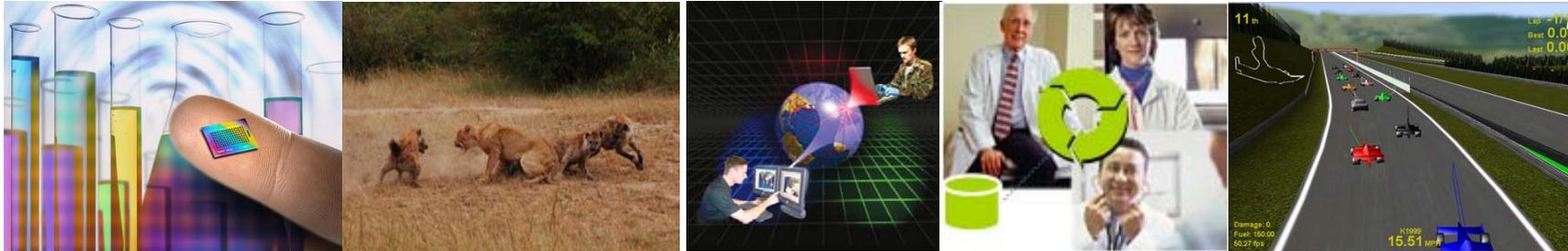
Technology Exchange and Impact

- * **Provide an Evolution in Action Think Tank for current and future needs.**
- * Strive for 2-way technology exchange
- * Industry provides problems and technical challenges
 - Go beyond “contract-based” relationship
- * BEACON provides industry-relevant technology and/or solutions
 - Academic and university jointly developed



Strategy

- * Work with small number of industrial collaborators
 - Represent different application domains



- * Have already identified candidate collaborators
 - History of collaboration
 - Have already provided data and/or problems
- * Identify thrust groups and enabling technologies

Industry Participation

- * Provide realistic (industrial-strength) data
 - Sanitized
 - Real-world constraints/conditions
- * Identify challenges and concrete problems
- * Provide feedback on preliminary results
- * Identify point of contact
- * Outreach:
 - Explore summer internships
 - Class projects
 - Member of technical staff sabbaticals in BEACON
 - Faculty sabbaticals



Early Plans



- * Kickoff meeting with industrial collaborators
 - Learn about industry challenges/problems
 - Industry exposed to existing and new capabilities
 - Identify potential tangible results
 - Identify measures for success (validation?)
- * Identify ***longer term research*** areas
 - Identify difficult problems
 - Contribute to defining vision for BEACON
- * Identify ***shorter-term results***
 - Explore joint IP ventures as appropriate
 - Different funding models (e.g., contracts, mini-grants, etc.)



Growth Plans



- * As research collaborations further solidify
 - Recruit additional industrial partners
 - Expand the problem domains

- * Explore migration paths for research
 - Pilot projects in industry
 - Incorporation into methodologies/tools
 - Documented case studies
 - Commercialization of research results

- * Explore sustainable funding models
 - Longer term contracts/grants to universities
 - Spin-off companies
 - etc.

