Pursuing High-Tech Academia Leadership Excellence: How to Proceed?

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For Worldwide Excellence
Professional Publication Channels

• Proceedings of **conferences/symposia/workshops** (especially Annual **flagship** conference)
• Archival **journals**
  - Invited papers, **Regular** papers, Short/Brief papers
• Society magazines
  - Feature articles, Post-conference reports
• Book Chapters
• Books
  - Edited, or Authored
• Patents

*For Worldwide Excellence*
Conference Publications

• Regular Sessions
  ➢ Most common forum

• Invited Sessions (higher-level goal)
  ➢ Paper Author
  ➢ Session Organizer and/or Chair

• Tutorial, Short-courses
• Panels
• Keynote, Plenary Talks
People Related to (Journal) Publication

• Author(s) himself/herself/themselves
• Author’s Peers (domestic or international)
• 3-5 Reviewers
• Associate Editor
  ➢ or Area Editor
• Editor-in-Chief
  ➢ or Guest Editor for Special Issue
• Many Readers

For Worldwide Excellence
Push or Pull?

- Ask “Who will benefit most?”
  - The Author(?), peers, the Reviewers(?), Asso. Editor, or EIC?
- Pioneering/Breakthrough paper
  - Opening up new field or technical area
  - Many researchers will benefit from it.
- **Opposite** ways of mentioning *prior arts*
  - Multi-party activities, Not *zero-sum* game
  - **Push:** Enumerate the limitations: Ask for *blocking* force
  - **Pull:** or Elaborate the contributions: Invite *assistance* force

*For Worldwide Excellence*
To Establish Core Cooperative Team

• Uprising Team
  Ø With a mixture of domestic and international peers
  Ø From a mixture of common and/or complementary areas
  Ø With a mixture of “age”/recognition groups

• Activities
  Ø Maintain regular communication: via email, telephone, face-to-face meetings, at conferences, etc
  Ø Share pre-publication technical reports
  Ø Conduct research cooperation, Share publication opportunities
To Enlarge Beneficiary Team

• Special Issue (journals), Invited Session (conferences)
  ➢ Provide visible and extra opportunities to peers

• New Initiatives
  ➢ Embrace or facilitate new technical emphasis/area/field
  ➢ During recent years: such as neural networks, multimedia, sensors, wireless, nanotechnology, biotechnology

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Positive Feedback and Team Effort

- Strengthening inside Professional Society
  - Technical Committee (TC), or Special Interest Group (SIG)
  - **Leadership Role:** Assoc Editor, EIC, Board of Governors, Administrative Committee, VP or President-Elect officers

- Promotion and Recognition
  - As *Nominee, Nominator, Endorser, Reference*
  - Senior Membership
  - **Fellow** Award
  - Technical (paper) Award, Service Award, etc

- Strategic alliance with leading universities
  - Need concrete substance from all faculty members, in *various aspects*
First Homework & Possible Actions

• Data collection and analysis
  - Factors deciding rank standing:
    1. Institution aspect;   2. Teaching & Research
    3. People aspect: Faculty, Students, Staff

• Self-examination
  - Any fundamental limitations and/or deficiency

• What to do?
  - A. Obvious and/or quick-response items
  - B. Fundamental and/or time-consuming items

• What to avoid?
  - C. Fatal items
  - D. Circling items

For Worldwide Excellence
Useful Features

• **Scalable**
  - Allow easy zoom-in/zoom-out on selective topics
  - Facilitate event-driven approach, not uniformly

• **Hierarchical**
  - Accommodate continuous exponential growth following Moore’s Law

• **Nurturing and Rewarding**
  - Suitable recognition for achievements and efforts

• **For 21st Century**
  - Encourage thinking-out-of-box endeavors
• Contribution in Program Development
  - Explore priorities and relationships in teaching analog and digital
  - Develop, enhance and adopt courses on emerging fields, such as nanotechnology, biotechnology, etc.

• Contribution in Program Delivery
  - Develop initiatives to forge alliances between leading universities for advanced course delivery methods, through distance learning, etc.
Industrial Outreach by CASS

• Very Successful 1985 ISCAS Benchmark
  ➢ Widely used in academia and industry
  ➢ For publication in journals and conference proceedings
  ➢ Almost 20 years ago

• Possible 2004 or 2005 CASS Benchmark ?!
  ➢ Involved CANDE and/or other Technical Committees

• Other Areas
  ➢ Video/image processing
  ➢ Others open for suggestion
Four modes in participating

• Stable ground-state mode
  ➢ Seldom move beyond basic states

• Open-loop mode
  ➢ Unable to predict next state

• Closed-loop with negative feedback mode
  ➢ Converge to desired state, e.g. AE, BoG, etc

• Closed-loop with positive feedback mode
  ➢ Ramping to top spots such as EIC, ExCom, President-Elect, etc
Proven actions

• Meet or beat the deadline
  ➢ Always ready to run, and avoid dragging

• Add GAIN effect to the actions
  ➢ Avoid like a passive element, e.g. resistor
  ➢ Act like active element, e.g. transistor with gain

• As leader, to outperform avg. peers
  ➢ Higher than avg. to be sensed as logic-1
  ➢ Lower than avg. to be sensed as logic-0
Summary

• Old English saying
  ➢ “As long as there is will, there is a way.”

• Please provide
  ➢ comments/suggestions
  ➢ or critical feedback

• Let’s devise the roadmap