# IEEE Systems Council

# Workforce Development Technical Committee

**Aug 7, 2015, 3.40pm Eastern**

Present: Richard Millham, Julia Bermejo

- Introduction
- Approval of Past Minutes (review and revise where necessary)
- Discussion of IEEE First International Symposium on System Engineering in Rome
    - Possible format of workshop programme
        - Conf ranges from trad foundations of system engineering to wireless transmitter for the disabled
        - Wide range for possible topics
    - Possible Ideas:
        - Socio-technical systems
            - Role of humans in engineering
                - Human interfaces and factors
                - Tech communicating with its environment
                - Number of funding initiatives/conferences
                - Multi-disciplinary: psych, anthropology
                - guide for workforce development (more multi-disciplinary education and approach) as trad tech not always useful
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        - Pervasive systems integrate systems with each other
            - Ex: drones, UID: cope with possible scenarios
            - Manage reliability and resilience
            - Manage big data – sensor arrays, multi-media input
            - Make systems more resilient, handle human errors, provide them with safety
            - Systems lack common terminology

Workforce Development:

- Traditional tech education inadequate, highlighted in these systems
- Need to be more broader and multi-disciplinary
- Common terminology required
- More focus on engineering for consumer/business focus; team work
- Engineering in different domains (ex: software vs hardware) which involves educating to consider different stakeholder viewpoints and globalisation factors
- Role of project leader: technical expertise with people management (additional skills to be taught)

Examples of diversities:

a) Africa:
    a. Cost sensitivity

       b. Lack of needed expertise
       c. Illiteracy
       d. Diverse cultures

b) Europe:
       a. Different specific eng terminology
       b. Different approaches to testing, development, standards, organisations, procedures, et al
       c. Different approaches to deadlines and project management
       d. Language barriers and mistranslation confusion
       e.