How to Start an Emerging Technology Initiative

The IEEE Communications Society (ComSoc) has Technical Committees (TC) covering diverse topics spanning most areas of the ComSoc research community.   However, when new research areas emerge, the existing set of technical committees can be updated by the addition of new TCs, or sub-committees within a TC. The mechanism for doing this is an Emerging Technology Initiative (ETI) through the IEEE Emerging Technologies Committee (ETC). The ETC evaluates proposals for an ETI. If approved, the ETC then mentors and assesses each ETI, ultimately approving some of them for elevation to a full TC.

The benefits of forming an ETI include:
- Visibility for the topic within ComSoc, e.g. a formal webpage, ability to develop other online content,
- Preferred access to developing Special issues in JSAC and Communications Magazine (their EICs are on the ETC)
- Ability to form Selected Areas in Communication Tracks at Globecom and ICC
- Other benefits and support from being a formal ComSoc entity

This document attempts to shed light on the key steps involved in forming a Emerging Technology Initiative (ETI). This document builds upon the ComSoc guidelines identified in http://www.comsoc.org/about/documents/pp (Section 9.7.7.3). By publishing this additional document, the IEEE ComSoc ETC hopes to help the research community go about this process in a fast and efficient manner.

1. Define a Scope and Title for the new ETI
The first step is to identify the scope and an appropriate title for the ETI. While preparing the scope, it is important for the proposer to consider existing TCs and ETIs, and explain the relationship and possible overlap with them. The scope should also be clear if the ETI intends to serve the academic or the industry community, or both.

2. Explain what the ETI intends to do
The ETI must cover a topic of importance to the ComSoc community. It can either be a) an emerging area with research scope many years into the future, or b) a current "hot topic", but with a possibly limited lifespan. Identify any related research and standards activities (if any) associated with this topic.

3. Provide list of active researchers in the area
The ETI should be able to identify at least twenty or more active contributors in this area around the world. An active contributor can be defined as those who are publishing papers in flagship conferences/journals or contributing to standards in the topics to be covered by the ETI within the last year or two. The assumption here is some of these contributors would be willing to become officers of the ETI. At least ten of these contributors have to sign the application to become a ETI.

4. Call an open meeting

The next step is for the proposers to call for an open meeting of active contributors. Such a meeting could be help at suitable flagship conference venue that will likely attract publications in this topical area. The levels of attendance and feedback from such a meeting will be critical in helping the ETC to assess the possible value of creating such an ETI.

If sufficient interest is visible at the meeting (in terms of both attendance and feedback from participants), then Interim Officers should be elected for this potential ETI. Such an election should happen at this meeting, and the list of members voting shall be recorded.

5. Prepare formal ETI proposal to ETC

The interim officers – Chair, Vice-Chair and other appropriate officers (e.g. Secretary, Standards or Industry Liaison, etc.) – shall prepare a formal proposal for establishing an ETI. The formal proposal shall contain the title, scope, description, information on the interim officers, and a listing of a community of active contributors in this space. The proposal should also contain minutes of the open meeting where the leadership committee was elected.

The formal proposal should be sent to the current ETC Chair as an email attachment. Upon receipt, the ETC will consider the proposal as soon as possible, either through an in-person meeting or via remote discussions. The ETC members will vote to either approve or reject the proposal. A decision to reject will generally be accompanied by a brief rationale for the rejection, and could include suggested revisions or improvements.

6. Establishment of the ETI

If the ETI is approved, then the ETI should convene a meeting of the active members to confirm/elect officers of the ETI. It is important to maximize participation in this first meeting. A mailing-list of ETI members must be setup as soon as possible. The ETI officers shall also write the formal charter for the ETI within 2 months of approval. The ComSoc ETC Chair will provide a template for a charter.

7. ETI Activities

The ETI shall create a webpage under committees.comsoc.org that will disseminate information about the ETI activities (both ongoing and planned), including meeting minutes. The ETI shall conduct regular meetings among its members/contributors. The ETI shall seek to organize activities and make contributions in the topical area across publications, workshops, symposia, standards, tutorials, online content such as "Best Readings", distinguished lectures and other technical meetings.

8. ETI Updates and Elevation

The officers of the ETI must provide a bi-annual report to the ETC on a timely basis, as well as status updates when requested, typically semi-annually coinciding with ICC and Globecom. Generally an up-down decision is made after 4 years but can be made earlier, or in some cases extended beyond 4 years if the ETI is doing well but elevation to a full TC may be inappropriate.