Procedure

P-2019-001

ACES Project Organization and Development Procedure

The Academy of Motion Picture Arts and Sciences

Science and Technology Council

Academy Color Encoding System (ACES) Leadership Group

April 8, 2019

Summary: This document provides details on the organizational and decision making structure to be used in the development of the Academy Color Encoding System.

NOTICES

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Revision History

Date	Description
3/27/2018	Initial Version

Related A.M.P.A.S. Documents

Document Name	Description

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1 Scope

This document provides details on the organizational and decision-making structure and processes to be used in the post-v1.1 development of the Academy Color Encoding System (ACES), also known as "ACESnext". This document defines the various entities participating in the ongoing development of ACES, their role in the development process, and the procedures by which engineering changes, new system features and new tools intended to aid the adoption of ACES will be defined, developed, tested and released.

2 Background

The Academy Color Encoding System is a free, open-source, device-independent color management and image interchange system designed for production, mastering and long-term archiving of motion pictures. ACES has also experienced adoption in television, gaming, and virtual/augmented/mixed reality applications.

ACES is a project of the Academy's Science and Technology Council and was launched in 2004. Since inception, the project has been operated under the Academys rules for committee-driven activities with extensive consideration to industry participation in development, implementation and end-user adoption. A primary goal of the ACESnext initiative is to further enable community participation in and responsibility for continued enhancement of ACES capabilities and its industry-wide adoption. With the recent launch of the Academy Software Foundation (http://aswf.io), the Linux Foundation's open source software model for community-driven development work has been introduced to our industry, and ACES Leadership believes the ACES project can benefit from the collaborative practices intrinsic to this model.

It is with these practices in mind that the Academy is defining a new project organization structure for ACES, described in this document. This structure is intended to provide more ACES project oversight, development, test and implementation responsibility by the community of engineers, end-users and other stakeholders who rely on the system.

3 Organizational Structure

The organization structure shall consist of the following entities:

- Issue-specific Working Groups (temporary committees that exist until their specific work items). This is where the real development and implementation work is done.
- An ACES Architecture Technical Advisory Council (a permanent, or standing committee). Responsible for ensuring system integrity and self-consistency
- An ACES Implementation Technical Advisory Council (a standing committee). Responsible for ensuring operational practicality and sufficiency.
- An ACES Leadership Group (a standing committee). Responsible for ensuring appropriate project direction, release schedules and conflict resolution.

Figure 1 shows the basic organizational, communication and accountability structure.

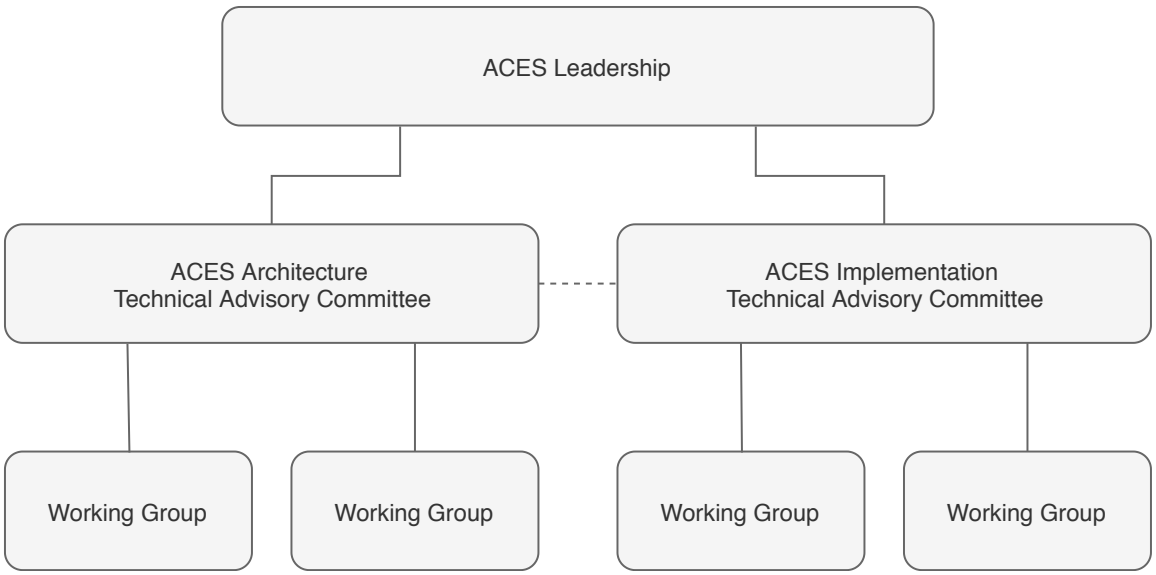


Figure 1 – ACES Project Organization Structure

3.1 Working Groups

Working Groups are intended to be short lived, issue based, pop-up groups driven by the ACES community's need to address issues and develop features for future versions of ACES. Working Groups serve as the mechanism for engineering, software development, documentation production, and other detailed development tasks for ACES. A Working Group may be proposed by any member of the ACES community willing and able to lead the activity by completing the Working Group Proposal form included in Appendix A and forwarding it to ACES Leadership, although socialization of proposal ideas within ACES Central and the appropriate Advisory Council is strongly recommended. Advisory Councils and ACES Leadership will work with the proposal submitter to refine the proposal, and will approve the proposal if all conditions for new projects are met. Advisory Councils and ACES Leadership may also initiate the Working Group proposal process if the need is clear and the environment is amenable to doing the work.

Working Group membership is open to anyone willing and able to actively and productively contribute to the work product. Working Group activity is visible to the public and open discussion within the Working Group's ACES Central discussion thread.

The Working Group chair presents interim status reports and final deliverables to the parent Advisory Council for review. When complete, the Working Group deliverables are forwarded by the parent Advisory Council to ACES Leadership for final review and release approval.

Working Group meetings will occur regularly, be advertised on ACEScentral.com in advance, and be open to the public. Effort will be made to record the meetings for later review and documentation purposes. The complete process from Working Group proposal to release of the Working Group deliverable(s) is outlined in the flowchart in Appendix B.

3.2 ACES Architecture Technical Advisory Council

The ACES Architecture Technical Advisory Council (Architecture TAC) is responsible for the peer review and acceptance of Working Group deliverables that impact or are impacted by ACES architecture. The Architecture TAC ensures Working Group deliverables are consistent with ACES architecture strategy and goals. The Architecture TAC is also responsible for ensuring Working Group activities are within their approved scope and that timelines are met. The Architecture TAC does not engineer solutions to particular problems but serves as a body to provide guidance and expert advice to the Working Groups it oversees. As such the TAC will be composed of both subject matter experts and technologists with a broad understanding of motion picture workflows and the impact of those workflows on their organization's objectives. TAC members should be invested in the success of ACES and have deep working knowledge of how ACES would strategically benefit the companies using it and the entertainment industry as a whole. Architecture TAC membership is by invitation of the TAC chair consistent with the parameters described below. Architecture TAC recommendations requiring a vote are approved by a simple majority of voting members. TAC members may not always agree on specific decisions but should seek to reach consensus that is in the best interest the ACES community. TAC recommendations are forwarded to ACES Leadership for ratification. Membership on the TAC is for 1 year, renewable for up to 2 additional years.

3.2.1 Leadership and Voting Members

The Architecture TAC should have between 12–18 members. The voting membership of the Architecture TAC should be composed as follows:

- The ACES Architecture TAC Chair, who is one of the ACES Project Vice Chairs
- Motion picture studio or production company representatives comprising approximately 30–40% of the TAC.
- Motion picture production subject matter experts in fields such as post-production, visual effects, cinematography, editorial, and archiving comprising approximately 30–40% of the TAC with the goal of having one TAC representative having subject matter expertise in each of the named fields.
- Game development studio representatives comprising approximately 10–20% of the TAC.
- Color science subject matter experts comprising approximately 10–20% of the TAC

No more than 2 members of the TAC should be employed by the same company.

3.2.2 Scope and Responsibilities

The scope and responsibilities of the ACES Architecture TAC shall include:

- ACES architecture definition revisions
- Core ACES transforms, encodings, color space details, etc.
- ACES metadata definitions and philosophy
- ACES file formats (ADSM, ACES/ADX Container Files, CLF, ACESclip, etc.)
- Other ACES architecture related-topics as needed and agreed to by ACES Leadership

3.2.3 Meetings

Meetings of the Architecture TAC will occur quarterly and will be open to the public. Meeting notifications will be posted to ACEScentral.com in advance. Non-voting meeting attendees may participate in the meeting discussions and provide relevant commentary at the discretion of the Architecture TAC Chair. Efforts will be made to record the meetings for later review.

3.3 ACES Implementation Technical Advisory Council

The ACES Implementation Technical Advisory Council (Implementation TAC) is responsible for the peer review and acceptance of Working Group deliverables that impact real-world implementations or are impacted by real-world implementation considerations. The Implementation TAC ensures Working Group deliverables are consistent with ACES implementation strategy and goals. The Implementation TAC is also responsible for ensuring Working Group activities are within their approved scope and that timelines are met. The Implementation TAC does not engineer solutions to particular problems but serves as a body to provide guidance and expert advice to the Working Groups it oversees. Implementation TAC membership is by invitation of the TAC chair consistent with the parameters described below. Implementation TAC recommendations requiring a vote are approved by a simple majority of voting members. TAC members may not always agree on specific decisions but should seek to reach consensus that is in the best interest the ACES community. TAC recommendations are forwarded to ACES Leadership for ratification. Membership on the TAC is for 1 year, renewable for up to 2 additional years.

3.3.1 Leadership and Voting Members

The Implementation TAC should have between 12–18 members. The voting membership of the Implementation TAC should be composed as follows:

- The ACES Implementation TAC Chair who is one of the ACES Project Vice Chairs
- ACES Product Partner representatives, with no more that one from each ACES Logo Program product category, comprising approximately 30–40% of the TAC
- Post-production facility representatives comprising approximately 10–20% of the TAC
- Visual effects facility/animation studio representatives comprising approximately 10–20% of the TAC
- Game development company representatives comprising approximately 10–20% of the TAC
- One (1) representative from the OpenColorIO project

3.3.2 Scope and Responsibilities

The scope and responsibilities of the ACES Implementation TAC shall include:

- The ACES Reference implementation
- ACES developer and end-user tools (e.g. e.g. rawtoaces, ACES container reference implementation, etc.)
- Advice on Logo Program requirements
- End-user documentation
- ACES plug-fests
- Other ACES implementation related-topics as needed and agreed to by ACES Leadership

3.3.3 Meetings

Meetings of the Implementation TAC will occur quarterly and will be open to the public. Meeting notifications will be posted to ACEScentral.com in advance. Non-voting meeting attendees may participate in the meeting discussions and provide relevant commentary at the discretion of the Implementation TAC Chair. Efforts will be made to record the meetings for later review.

3.4 ACES Leadership

As noted earlier, ACES continues to be a project organized under the auspices of the Academy Science and Technology Council, although the Council's long-term goal is to transfer project leadership to an appropriate, industry-led leadership structure such as the Academy Software Foundation. As such, a Council project oversight committee is still required, which takes the form of "ACES Leadership."

ACES Leadership is the team tasked with accountability to the Council for ACES adoption and ongoing development activities. ACES Leadership also sets the broad strategic goals of the ACES project; driven by the needs of the industry for digital image interchange, color management and long-term archiving. ACES Leadership works with the Architecture and Implementation TACs to develop these goals and to focus Working Group activities on achieving these goals. Along with accountability for the ACES project, ACES Leadership is responsible for reviewing and ratifying approved TAC recommendations.

As ACES branding makes use of the Academy trademarks, ACES Leadership organizes and oversees ACES marketing, Logo Program and public communications activities. ACES Leadership makes use of the Academy staff's ability to handle private discussions with ACES adopters and to provide "firewalling" of sensitive information.

3.4.1 Membership

The membership of ACES Leadership shall consist of the following:

- A volunteer ACES Project Chair selected from the Science and Technology Council membership
- Two (2) volunteer ACES Project Vice-Chairs
- Selected Science and Technology Council staff and consultants (as needed)

3.4.2 Scope and Responsibilities

The scope and responsibilities of ACES leadership shall include:

- ACES project strategy definition and execution
- Work item definition, prioritization and approval
- All public communications regarding the ACES project
- ACES project marketing efforts
- ACESCentral.com administration
- Other leadership and management functions as required

3.4.3 Meetings

The ACES Leadership team meets weekly to track ACES project progress, plan for public events and discuss specific issues as needed. Regular state of the project reports will be posted to ACESCentral.com by the ACES Project chair and vice-chairs.

Appendix A

(informative)

ACES Working Group Proposal

ACES Working Group Proposal

Proposal submitter
Submitter name

Proposal submission date
01/01/2018

Description of the problem or question(s) the Working Group will be investigating
List of question(s) to be answered by the Working Group.

Proposed Working Group deliverable(s)
Code, Document, TAC Recommendation, etc.

List of Proponents
Proponent 1, Proponent 2, Proponent 3

Anticipated core Working Group contributors
Contributor 1, Contributor 2, etc.

Anticipated Working Group lifecycle
Less than 2 months

ACES Leadership Use

☐ Approved
☐ Not approved
☐ Proposal modifications required

Review date
01/01/2018

Assigned Working Group Name
Working Group name

Assigned Working Group Lead
Working Group lead name

Supervising Technical Advisory Committee
☐ Architecture ☐ Implementation

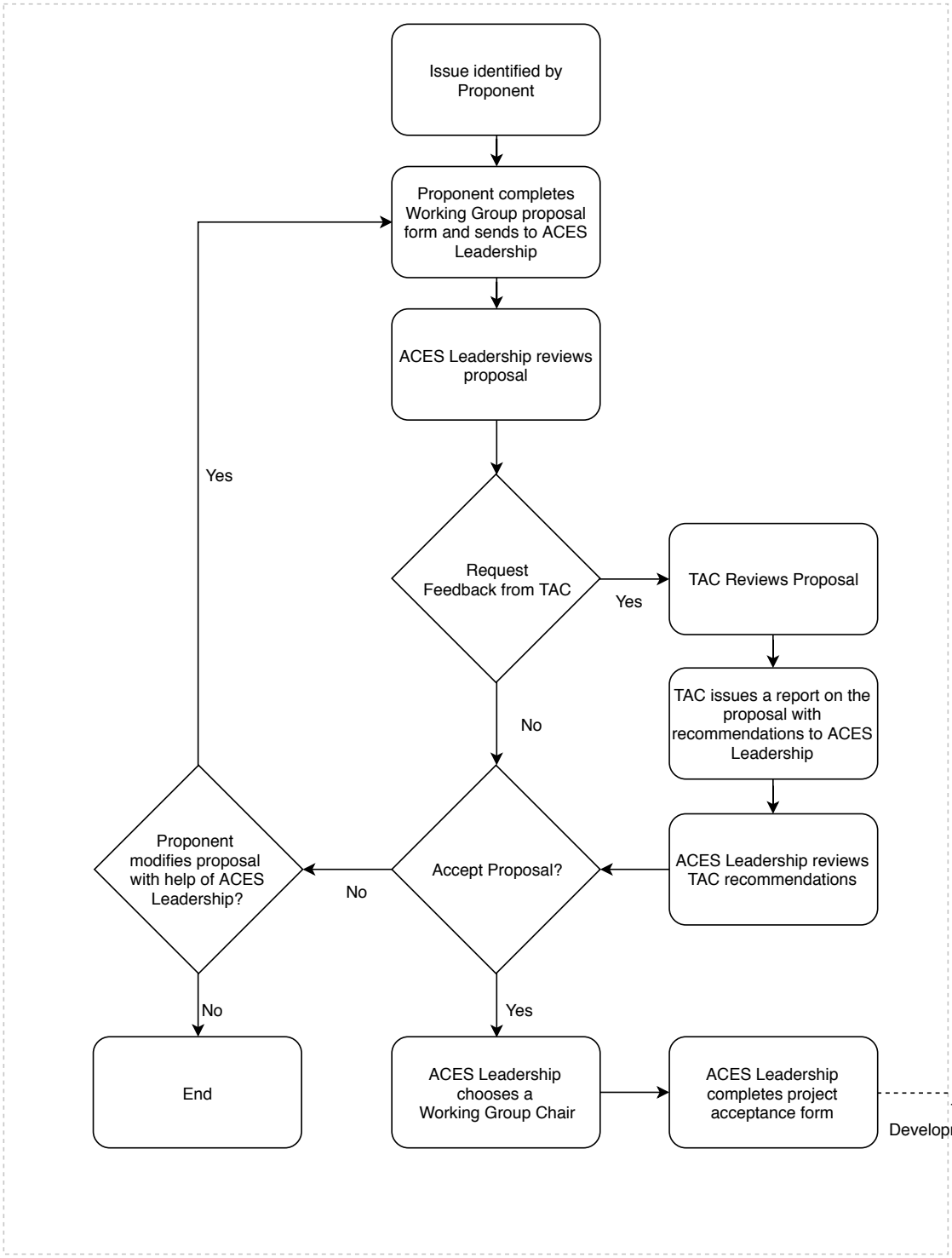
Anticipated Academy resources required
Staff administration, Staff technical support, Imaging Lab resources, Stella Stage resources, etc.

Notes
ACES Leadership Notes

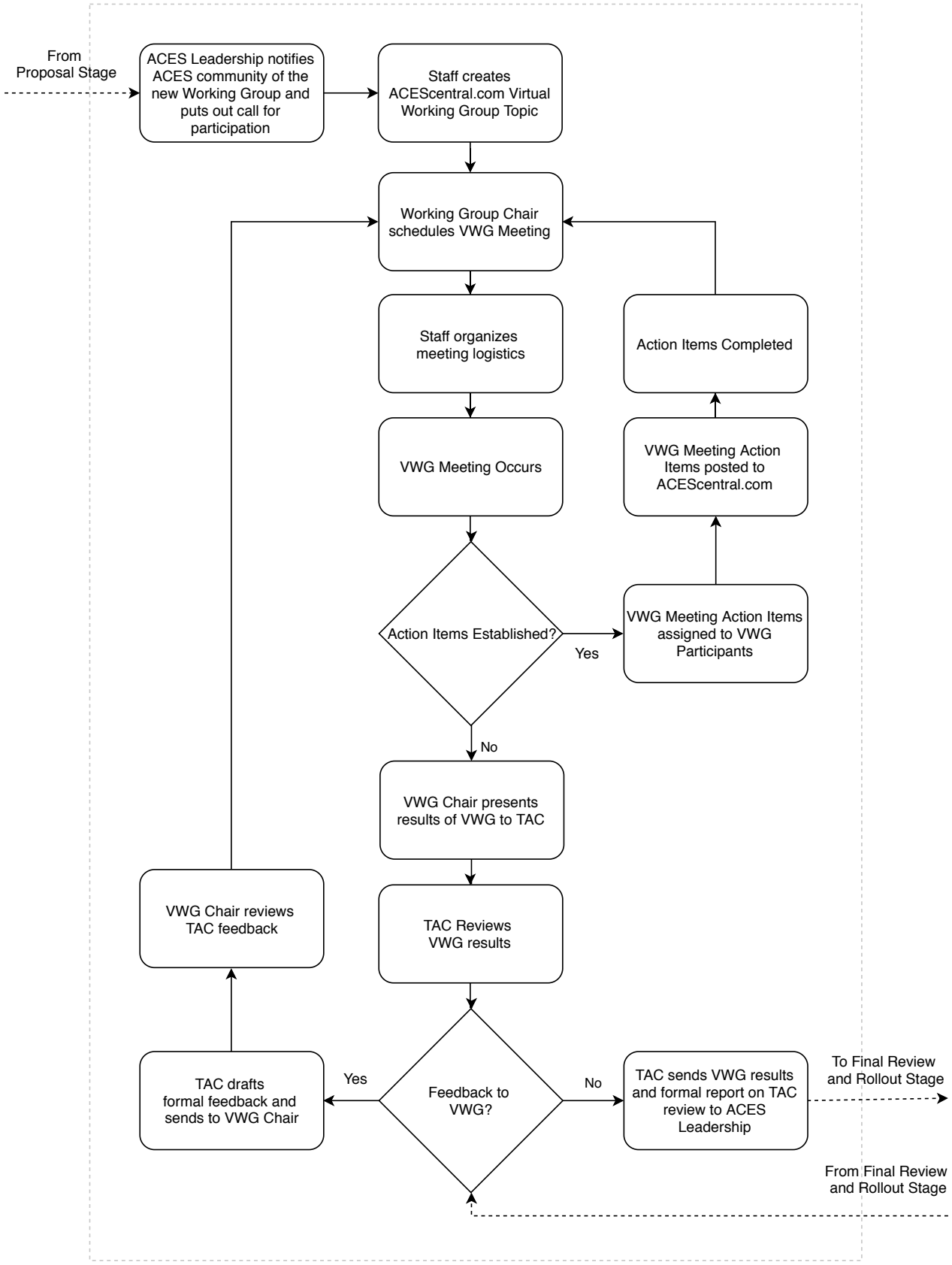
Appendix B

(informative)

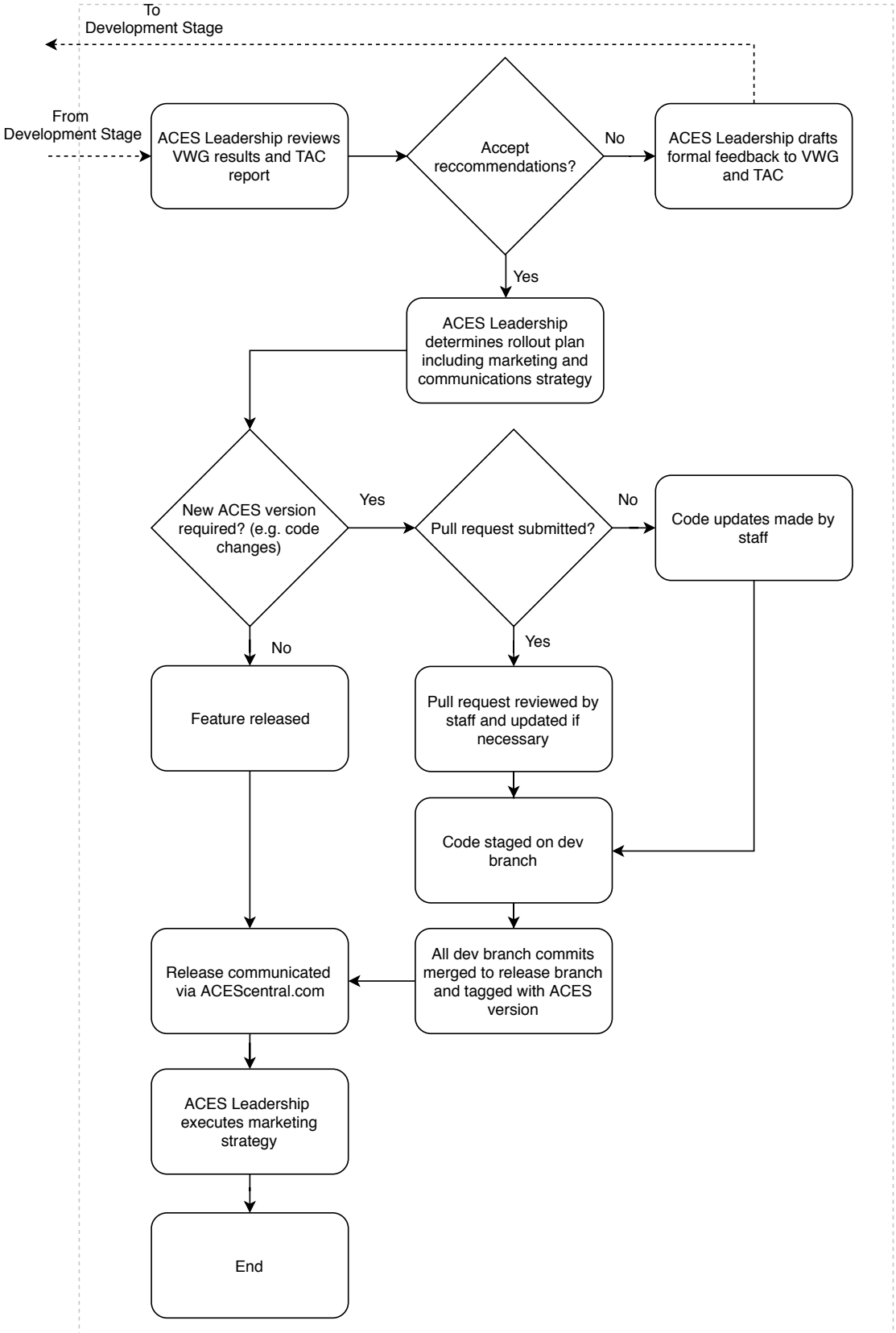
ACES Process Flowchart



Proposal Stage



Development Stage



Final Review and Rollout Stage