

















www.coe-cst.org



Federal Aviation Administration
Center of Excellence for
Commercial Space Transportation

Year 3 Annual Report

Volume 3. Teleconference Notes



COE CST YEAR 3 ANNUAL REPORT – VOLUME 3

This report is produced by the FAA Office of Commercial Space Transportation (AST) in fulfillment of FAA Centers of Excellence program requirements.

The full report is broken into three volumes:

- The Executive Summary gives an overview of the FAA AST, the FAA COE program and the COE CST. A brief description of the member universities precedes a series of "quad charts," one for each task conducted by the COE CST during the second year of operation. The document ends with a listing of the Year 2 students, supporting organizations and technical publications.
- Volume 1 gives a description of the FAA COE CST, its research, structure, member universities and research tasks.
- Volume 2 is a comprehensive set of presentation charts of each research task as presented at the second Annual Technical Meeting in October 2013.
- Volume 3 is a comprehensive set of notes from all FAA COE CST teleconferences and face-to-face meetings.

This is Volume 3 of the full report.

In addition to the COE CST Executive Committee Teleconferences notes given here, the notes and audio recordings of all these meetings are available on the web at the following URLs:

#	Date	Notes URL	Audio Recording URL
8	January 14, 2013	http://db.tt/V0ZXtAMc	http://db.tt/jc1X5Ob2
9	February 11, 2013	http://db.tt/oqtOygZv	http://db.tt/9upaPrnw
10	March 11, 2013	http://db.tt/SQTvWN0k	http://db.tt/Q9ki9ahn
11	April 08, 2013	http://db.tt/93XsJDGz	http://db.tt/kl4oN5Wn
12	May 06, 2013	http://db.tt/guEGtIIP	http://db.tt/6fa3NHIP
XX	May 22, 2013	PRE-AAM3 Telecon	http://db.tt/OSAcMirI
14	July 08, 2013	http://db.tt/MgI1Z3IY	http://db.tt/gJsqs3w6
15	August 12, 2013	http://db.tt/mL0UqHn9	http://db.tt/aJElg3cT
16	September 16, 2013	http://db.tt/toK2GS2z	http://db.tt/POow16U3
17	October 07, 2013	https://db.tt/ek5e4Ee5	https://db.tt/5eWD8y5v
XX	October 28-30, 2013	ATM3 held in Washington, DC	
18	November 18, 2013	https://db.tt/7QnURicW	https://db.tt/mQURuM8s

Any questions or comments about the content of this report should be directed to Mr. Ken Davidian, FAA Program Manager for the Center of Excellence for Commercial Space Transportation, or Dr. Patricia Watts, FAA COE Program Director.

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Introduction

This report includes all the notes from different Center of Excellence for Commercial Space Transportation (COE CST) teleconferences held during the period between January and November 2013.

Each telecon may have some combination of notes (read-ahead material sent out prior to a teleconference), minutes (taken during the teleconference and sent out after the meeting), and/or attachments.

During this time, there were 10 different Executive Committee (EC) Teleconferences conducted on the following dates:

- January 14, 2013 EC Telecon #08
- February 11, 2013 EC Telecon #09
- March 11, 2013 EC Telecon #010
- April 08, 2013 EC Telecon #11
- May 06, 2013 EC Telecon #12
- July 08, 2013 EC Telecon #14
- August 12, 2013 EC Telecon #15
- September 16, 2013 EC Telecon #16
- October 07, 2013 EC Telecon #17
- November 18, 2013 EC Telecon #18

Also, during this period was a PRE-AAM3 Telecon on May 22, 2013, and the Annual Conference in Washington, DC from October 28-30, 2013.

The remainder of this report volume includes all the notes, minutes and attachments from these meetings.

FAA AST COE CST EXECUTIVE COMMITTEE TELECON #08 - MONDAY, 14 JANUARY 2013

SCHOOL	PRIMARY	SECONDARY	ADDITIONAL
си	☐ Dr. David Klaus	☐ Dr. Penina Axelrad	□ Dr. George Born□ Dr. Tim Fuller-Rowell□ Dr. Dan Scheeres□ Mr. Brad Cheetham
FIT	☐ Dr. Dan Kirk	☐ Dr. Sam Durrance	□ Dr. Nat Villaire□ Dr. Tristan Fiedler
FSU	Dr. Farrukh Alvi	□ Dr. Emmanuel Collins	□ Dr. Billy Oates
NMSU	☐ Dr. Patricia Hynes		■ Ms. Joylynn Watkins
NMT	☐ Dr. Warren Ostergren	☐ Dr. Dave Westpfahl	□ Dr. Keith Miller□ Dr. Andrei Zagrai
su	☐ Prof. Scott Hubbard	☐ Dr. Juan Alonso	□ Dr. Sigrid Close□ Dr. Steve Rock
UCF	☐ Dr. Jay Kapat	☐ Dr. Jan Gou	□ Dr. Ali Gordon□ Dr. Lin An
UF	☐ Dr. Norm Fitz-Coy	□ Dr. Mark Sheplak	
UTMB	□ Dr. Jim Vanderploeg	□ Dr. Richard Jennings	□ Dr. Tarah Castleberry
CESTAC	Dr. Joseph Rothenberg	Ms. Carissa Christensen	
OAT	■ Ms. Carol Gregorek	☐ Mr. Fred Bowen	
FAA AST	☐ Mr. Ken Davidian		
FAA	☐ Dr. Patricia Watts		☐ John Reinhart (UAS COE)
NASA	☐ Mr. Alex MacDonald (RA4)	☐ Dr. Dan Rasky	□ Bruce Pittman

0.1 Executive Committee Meeting Information

- Dial-In #: 712-432-0075, Participant Access Code: 141648#
- The next telecon is scheduled for February 11, 2013, 1-2pm EDT.

0.2 Proposed Order of Major Topics of Discussion

- 1. Starters (Administrivia)
- 2. Self-Governance Subcommittee Report
- 3. Collaboration Subcommittee Report
- 4. Strategic Planning Subcommittee Report
- 5. Any Other Business

0.3 Appendices

Current Draft of Affiliate Member Solicitation

1. STARTERS (ADMINISTRIVIA)

1.1 Quarterly Reporting Status

• OMIS input of quarterly report information for FY13 Q1 is due January 31, 2013 for the period of activity from October 1 – December 31, 2012.

1.2 Year 2 Annual Report

- The COE CST Year 2 Annual Report Executive Summary ("Vol. 0") has been submitted to the printers. 500 copies are scheduled to be delivered before the end of the month.
- Volumes 1-3 of the COE CST Year 2 Annual Report are scheduled to be delivered to Pat Watts before the end of March. (The deadline is 90 days from the end of the year.)

1.3 Planning for the Third Annual Administrative Meeting (AAM3)

• What: 2-day COE CST management and administrative meeting.

- Why: Discuss administrative topics, face-to-face meeting opportunity, conduct subcommittee activities.
- Who: Required: EC primary and/or secondary members from Member Universities, CESTAC, FAA and OAT. (See front page roster for names.) Optional: Other Member University PIs and Students, CESTAC members, NASA members.
- Where: Current plans are to hold the meeting at the Residence Inn Atlantic City Somers Point, 900 Mays Landing Road, Somers Point, NJ 08244, (609) 927-6400, not far from the FAA William J. Hughes Technical Center, Egg Harbor Township, NJ 08234.
- When: Candidate dates are mid-April through mid-May. Week of least conflict seems to be May 13-17. Still awaiting Pat Watts' input.
- How? Most probably fly into Philadelphia (PHL), rent a car and drive 70 miles to the hotel.
- How Much? Airfares seem to start from \$300-\$350 for round-trip fares between PHL and MCO, DEN, SFO and IAH (based on hipmunk.com airfare search on Jan 10, 2013).

1.4 Website Status (Fred Bowen)

• Planned transition to new hosting company after ATM2.

1.5 Budget and Finance Stuff

- SOWs of current COE CST tasks in FY13 Internal Solicitation of Research (ISR13) available at the following URL: http://db.tt/2lLr0jJ0
- Current Schedule:
 - ISR Release: 14 January
 - Proposals Due: 15 March
 - Evaluation Complete Task Funding Selection: April 26.
 - Notification: May 3.

1.6 Solicitation of Affiliate Members

Current solicitation showing changes based on recent comments received attached.

1.7 General Comments

- New Space Journal: Mini-Issue available early February. Inaugural Issue early April. We encourage the submission of COE CST-related papers.
- Stanford Institute for Economic and Policy Research (SIEPR) Commercial Space Forum: Jan 31-Feb 1.

2. SELF-GOVERNANCE SUBCOMMITTEE REPORT

 GOAL: TO DEVELOP A SET OF SELF-GOVERNANCE DOCUMENTS. Beginning with an EC Terms of Reference document, working through the second step of an EC Management Plan of its own, and culminating with an EC Constitution that will be iteratively refined over multiple years, these will evolve toward the foundational document for the COE CST entering its self-sustaining phase after 10 years of guaranteed FAA funding.

2.1 Members

FIT – Nat Villaire

• UF – Norm Fitz-Coy

2.2 Activities

Nat will lead the "team" (of two!) and will present results of this subcommittee at AAM3.

3. COLLABORATION SUBCOMMITTEE REPORT

 GOAL: TO FOSTER COOPERATIVE EFFORTS AMONG INTERNAL AND EXTERNAL COE CST ENTITIES. To respond not only to FAA funding solicitations but also to external funding solicitations, cooperative efforts will require some modified posturing. The intent is to demonstrate through signaling and subsequent action that being a member of the COE CST and partnering with other member and non-member universities actually enhances the chances of winning funding for related research tasks.

3.1 Members

- UF Mark Sheplak
- FIT Tristan Fiedler (Lead)NMT Warren Ostergren
 - CU Penny Axelrad

- NMSU Pat Hynes
- UTMB Jim Vanderploeg

• CU – Dan Scheeres

3.2 CESTAC Report

Tristan is the EC POC to CESTAC.

3.3 Activities

Tristan will head this group.

4. STRATEGIC PLANNING SUBCOMMITTEE REPORT

 GOAL: TO BEGIN CONDUCTING STRATEGIC PLANNING ANALYSES. Strategic planning analyses will be very valuable to the COE CST and can provide the basis for sustained, meaningful activities among the participating members. The long-term goal is self-sustenance after 10 years and the results of many structured analyses will be essential to painting a more complete picture of how it can best be achieved.

4.1 Members

- CU Dave Klaus
- FIT Dan Kirk
- FSU Billie Oates
- SU Sigrid CloseSU Juan Alonso
- NMT Andrei Zagrei
- SU Scott Hubbard

4.2 Activities

 Dave Klaus will head this group and lead a strategic analysis with initial results to be presented at the upcoming AAM3.

5. ANY OTHER BUSINESS

FAA AST COE CST EXECUTIVE COMMITTEE TELECON #09 - MONDAY, 11 FEBRUARY 2013

SCHOOL	PRIMARY	SECONDARY	ADDITIONAL
CU	☐ Dr. David Klaus	☐ Dr. Penina Axelrad	 □ Dr. George Born □ Dr. Tim Fuller-Rowell □ Dr. Dan Scheeres □ Mr. Brad Cheetham
FIT	☐ Dr. Dan Kirk	☐ Dr. Sam Durrance	□ Dr. Nat Villaire□ Dr. Tristan Fiedler
FSU	Dr. Farrukh Alvi	☐ Dr. Emmanuel Collins	□ Dr. Billy Oates
NMSU	□ Dr. Patricia Hynes		Ms. Joylynn Watkins
NMT	☐ Dr. Warren Ostergren	☐ Dr. Dave Westpfahl	□ Dr. Keith Miller□ Dr. Andrei Zagrai
su	☐ Prof. Scott Hubbard	☐ Dr. Juan Alonso	□ Dr. Sigrid Close□ Dr. Steve Rock
UCF	☐ Dr. Jay Kapat	☐ Dr. Jan Gou	☐ Dr. Ali Gordon☐ Dr. Lin An
UF	☐ Dr. Norm Fitz-Coy	□ Dr. Mark Sheplak	
UTMB	Dr. Jim Vanderploeg	Dr. Richard Jennings	Dr. Tarah Castleberry
CESTAC	Dr. Joseph Rothenberg	Ms. Carissa Christensen	
OAT	☐ Ms. Carol Gregorek	☐ Mr. Fred Bowen	
FAA AST	☐ Mr. Ken Davidian		
FAA	□ Dr. Patricia Watts	Dennis Flath	☐ John Reinhart (UAS COE)
NASA	☐ Mr. Alex MacDonald	☐ Dr. Dan Rasky	☐ Bruce Pittman

0.1 Executive Committee Meeting Information

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0.2 Proposed Order of Major Topics of Discussion

1. Starters (Administrivia)

- 3. Collaboration Subcommittee Report
- 2. Self-Governance Subcommittee Report
- 4. Strategic Planning Subcommittee Report
- 5. Any Other Business

0.3 Attachments

• Guideline for Establishing a Task with an Affiliate Member in the COE CST.

1. STARTERS (ADMINISTRIVIA)

1.1 RECENT MEETINGS

- Jan 31-Feb 1: Stanford Institute for Economic and Policy Research (SIEPR) Commercial Space Forum.
- Feb 6-7: 16th Annual FAA Commercial Space Transportation Conference.

1.2 Quarterly Reporting Status

- OMIS input of quarterly report information for FY13 Q1 is due January 31, 2013 for the period of activity from October 1 December 31, 2012.
- As of Monday, Feb 7:
 - # Completed FY13Q1 Status Reports: 18
 - # Tasks to Complete in OMIS: 3
 - # Overdue FY13Q1 Status Reports: 13

1.3 Year 2 Annual Report

- The COE CST Year 2 Annual Report Executive Summary ("Vol. 0") has been submitted to the printers. 500 copies are scheduled to be delivered before the end of the month.
- Volumes 1-3 of the COE CST Year 2 Annual Report are scheduled to be delivered to Pat Watts before the end of March. (The deadline is 90 days from the end of the year.)

1.4 Planning for the Third Annual Administrative Meeting (AAM3)

- What: 2-day COE CST management and administrative meeting.
- Why: Discuss administrative topics, face-to-face meeting opportunity, conduct subcommittee activities.
- Who: Required: EC primary and/or secondary members from Member Universities, CESTAC, FAA and OAT. (See front page roster for names.) Optional: Other Member University PIs and Students, CESTAC members, NASA members.
- Where: Current plans are to hold the meeting at the Residence Inn Atlantic City Somers Point, 900 Mays Landing Road, Somers Point, NJ 08244, (609) 927-6400, not far from the FAA William J. Hughes Technical Center, Egg Harbor Township, NJ 08234.
- When: Dates between mid-April through mid-May did not identify dates when all could attend.
 New Doodle poll released to look for possible dates between mid-May and late-June.
- How? Most probably fly into Philadelphia (PHL), rent a car and drive 70 miles to the hotel.
- How Much? Airfares seem to start from \$300-\$350 for round-trip fares between PHL and MCO, DEN, SFO and IAH (based on hipmunk.com airfare search on Jan 10, 2013).
- Tentative Agenda
 - Administrative Starters
 - Quarterly Reporting Status
 - Planning for ATM3: Who (Host), Where & When (Dates), What (Format, Content, Tours)
 - Website Status: CST website and how to increase use among the group
 - Budget and Financial Topics: Recently Completed FY13 Awards, Look-Ahead to FY14 Funding
 - Affiliate Members (can Bill Sheehan attend this part of the meeting?): Solicitation Responses, Host University Responsibilities, Selection Process, Next Steps
 - CESTAC Input
 - General Comments: COE CST Summer Internship Program, Do we have minority schools we want to reach out to? Faculty mentoring?, COE CST Letterhead Design Selection, Slogan competition
 - Self-Governance Subcommittee Report Nat Villaire to provide activity/content.
 - Collaboration Subcommittee Report Tristan Fiedler to provide activity/content.
 - Strategic Planning Subcommittee Report Dave Klaus to provide activity/content.
 - Any Other Business (AOB): Suggested Cooperative Agreement Modifications
 - FAA Technical Center Tour

1.4 Website Status (Fred Bowen)

• Status of transition to new hosting company.

1.5 Budget and Finance Stuff

- SOWs of current and new COE CST tasks in FY13 Internal Solicitation of Research (ISR13) distributed.
- Current Schedule: ISR Release: 14 January. Proposals Due: 18 March. Evaluation Complete
 Task Funding Selection: April 26. Notification: May 3.

1.6 Solicitation of Affiliate Members

- DRAFT HOST UNIVERSITY PROCESS: (See Attachment 1 for complete document): When a new task is proposed with an Affiliate Member, the Host University will need to:
 - Submit their proposal through the standard FAA proposal process using grants.gov.
 - Submit the appropriate budget (even if the budget is \$0).
 - Submit Cash/In-Kind Match form (FAA COE In-Kind Cost Sharing) with supporting documentation from the Affiliate Member.
 - Upon acceptance, the task will be tracked in OMIS and the Affiliate Member will be setup as a "Primary Partner" permitting the OMIS to track the matching contributions.
 - Establish a method of receiving financial reports from the Affiliate Member that will satisfy the Host University auditor(s) and their State regulations.
 - Be responsible for entering the matching contributions in OMIS.
- A lot of interest was expressed at AST Conference last week.

1.7 General Comments

 New Space Journal: Mini-Issue now available. Inaugural Issue early April. We encourage the submission of COE CST-related papers. We are thinking about having a regular feature by COE CST students.

2. SELF-GOVERNANCE SUBCOMMITTEE REPORT

• FIT - Nat Villaire*

• UF – Norm Fitz-Cov

2.1 Activities

Nat will lead the "team" (of two!) and will present results of this subcommittee at AAM3.

3. COLLABORATION SUBCOMMITTEE REPORT

- UF Mark Sheplak
- FIT Tristan Fiedler*
- CU Penny Axelrad

- NMSU Pat Hynes • CU – Dan Scheeres
- NMT Warren Ostergren
- UTMB Jim Vanderploeg

3.1 CESTAC Report

• Tristan is the EC POC to CESTAC.

3.2 Activities

Tristan will head this group.

4. STRATEGIC PLANNING SUBCOMMITTEE REPORT

- CU Dave Klaus*
- SU Sigrid Close
- NMT Andrei Zagrei FSU Billie Oates

- FIT Dan Kirk
- SU Juan Alonso
- SU Scott Hubbard

4.1 Activities

• Dave Klaus will head this group and lead a strategic analysis with initial results to be presented at the upcoming AAM3.

5. ANY OTHER BUSINESS

Attachment 1: Guideline for Establishing a Task with an Affiliate Member in the COE CST

This document is intended to provide guidance only when setting up a research task within the COE CST that has an Affiliate Member component. These guidelines are for consideration only and should not be considered as "official FAA policy".

An affiliate member is defined as "An Affiliate University Member or Affiliate Industry Member (generally referred to as an Affiliate Member) is distinguished by bringing their own self-funded, unique research activities to the COE CST network". Affiliate Members are associated with the COE CST through a Host University. A Host University is one of the nine COE CST Member Universities that provides a rational and meaningful linkage between the COE CST and the Affiliate Member.

When a new task is proposed with an Affiliate Member, the Host University will need to

- Submit their proposal through the standard FAA proposal process using grants.gov.
- Submit the appropriate budget (even if the budget is \$0).
- Submit Cash/In-Kind Match form (FAA COE In-Kind Cost Sharing) with supporting documentation from the Affiliate Member.
- Upon acceptance, the task will be tracked in OMIS and the Affiliate Member will be setup as a "Primary Partner" permitting the OMIS to track the matching contributions.
- Establish a method of receiving financial reports from the Affiliate Member that will satisfy the Host University auditor(s) and their State regulations.
- Be responsible for entering the matching contributions in OMIS.

Below is more information for review and is provided for clarification.

- FAA COE In-Kind Cost Sharing Guidance
- OMB Circular A-110 Section .23 Cost Sharing or Matching
- FAA Centers of Excellence Matching Contribution Form

FAA COE In-Kind Cost Sharing Guidance

Please refer to OMB Circular A-110 Section .23 Cost Sharing or Matching.

Additionally, the FAA COE Matching Contribution Form is to be completed and submitted prior to award when the

- o <u>value</u> of in-kind activities are calculated (vs the cost of the contribution)
- matching contributions are based on activities that are not solely conducted for the purpose of supporting a funded COE project.

In the instance where the in-kind cost sharing activity is <u>not solely for the benefit of the proposed project</u>, the activities conducted and provided by a third-party source will be clearly defined <u>in the proposal submission</u> to justify the value of the anticipated contribution to the specific project(s).

- A. Each investigator proposing credit for such contributions will review the anticipated cost sharing plan with his/her Fiscal Officer.
- B. Prior to submission of the proposal to the FAA, the university COE member's Fiscal Officer will discuss the plan with the COE lead institution's Fiscal Officer for consideration in accordance with the lead institution's policies and procedures on cost-sharing. The university Fiscal Officer will notify the FAA COE Program Director/Grants Officer that such a proposal is under consideration and in the process of being submitted.
- C. In applying the value of a contribution versus the direct cost of contribution, the interpretation of the Fiscal Officer representing the COE Lead institution regarding the amount found to be "prudent and reasonable" will hold for all those participating on the project. The COE Lead institution is expected to conduct discussions and make a determination within 5 business days.
- D. The COE Lead institution will forward a concurrence notice to the COE Program Office with a justification for the value of the cost-share proposed.
- E. The FAA COE Program Director will consider each request on a case-by-case basis. The expectation is that all COE members and Leads will be prudent in developing value statements and formulas.
- F. In keeping with Legislative intent and the spirit of COE enabling legislation, Public Law 101-508, the FAA will not allow the in-kind nonspecific contributions that might be a result of one project to satisfy the matching obligations for an entire agreement Phase or for a significant number of other funded projects.

Although the COE Fiscal Officers and ultimately the FAA may accept the value of the documented contribution as reasonable, allowable and allocable, each university is subject to final acceptance by its own auditor(s). Any penalty imposed by a cognizant auditing agency is the sole responsibility of the recipient providing the contribution and the associated documentation (Prime or Sub recipient).

OMB Circular A-110 Section .23 Cost Sharing or Matching

- (a) All contributions, including cash and third party in-kind, shall be accepted as part of the recipient's cost sharing or matching when such contributions meet all of the following criteria.
- (1) Are verifiable from the recipient's records.
- (2) Are not included as contributions for any other federally-assisted project or program.
- (3) Are necessary and reasonable for proper and efficient accomplishment of project or program objectives.
- (4) Are allowable under the applicable cost principles.
- (5) Are not paid by the Federal Government under another award, except where authorized by Federal statute to be used for cost sharing or matching.
- (6) Are provided for in the approved budget when required by the Federal awarding agency.
- (7) Conform to other provisions of this Circular, as applicable.
- (b) Unrecovered indirect costs may be included as part of cost sharing or matching only with the prior approval of the Federal awarding agency.
- (c) Values for recipient contributions of services and property shall be established in accordance with the applicable cost principles. If a Federal awarding agency authorizes recipients to donate buildings or land for construction/facilities acquisition projects or long-term use, the value of the donated property for cost sharing or matching shall be the lesser of (1) or (2).
- (1) The certified value of the remaining life of the property recorded in the recipient's accounting records at the time of donation.
- (2) The current fair market value. However, when there is sufficient justification, the Federal awarding agency may approve the use of the current fair market value of the donated property, even if it exceeds the certified value at the time of donation to the project.
- (d) Volunteer services furnished by professional and technical personnel, consultants, and other skilled and unskilled labor may be counted as cost sharing or matching if the service is an integral and necessary part of an approved project or program. Rates for volunteer services shall be consistent with those paid for similar work in the recipient's organization. In those instances in which the required skills are not found in the recipient organization, rates shall be consistent with those paid for similar work in the labor market in which the recipient competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, allowable, and allocable may be included in the valuation.
- (e) When an employer other than the recipient furnishes the services of an employee, these services shall be valued at the employee's regular rate of pay (plus an amount of fringe benefits that are

reasonable, allowable, and allocable, but exclusive of overhead costs), provided these services are in the same skill for which the employee is normally paid.

- (f) Donated supplies may include such items as expendable equipment, office supplies, laboratory supplies or workshop and classroom supplies. Value assessed to donated supplies included in the cost sharing or matching share shall be reasonable and shall not exceed the fair market value of the property at the time of the donation.
- (g) The method used for determining cost sharing or matching for donated equipment, buildings and land for which title passes to the recipient may differ according to the purpose of the award, if (1) or (2) apply.
- (1) If the purpose of the award is to assist the recipient in the acquisition of equipment, buildings or land, the total value of the donated property may be claimed as cost sharing or matching.
- (2) If the purpose of the award is to support activities that require the use of equipment, buildings or land, normally only depreciation or use charges for equipment and buildings may be made. However, the full value of equipment or other capital assets and fair rental charges for land may be allowed, provided that the Federal awarding agency has approved the charges.
- (h) The value of donated property shall be determined in accordance with the usual accounting policies of the recipient, with the following qualifications.
- (1) The value of donated land and buildings shall not exceed its fair market value at the time of donation to the recipient as established by an independent appraiser (e.g., certified real property appraiser or General Services Administration representative) and certified by a responsible official of the recipient.
- (2) The value of donated equipment shall not exceed the fair market value of equipment of the same age and condition at the time of donation.
- (3) The value of donated space shall not exceed the fair rental value of comparable space as established by an independent appraisal of comparable space and facilities in a privately-owned building in the same locality.
- (4) The value of loaned equipment shall not exceed its fair rental value.
- (5) The following requirements pertain to the recipient's supporting records for in-kind contributions from third parties.
- (i) Volunteer services shall be documented and, to the extent feasible, supported by the same methods used by the recipient for its own employees.
- (ii) The basis for determining the valuation for personal service, material, equipment, buildings and land shall be documented.



Center of Excellence for		
Project Title:		
Please refer to OMB Circular A-110 Section.23	3 Cost Sharing or Ma	tching for allowable support.
Name:		_
Title:		
Contributing Organization:		
Address:		
Telephone:	Email:	
In-kind support: (see following guidance)		
Describe Contribution:		
Period of Contribution:		
Total In-Kind Contribution:		\$
Signature:		Date:
University PI:		E-mail:
FAA Tech Monitor:		

Please include this completed form when submitting matching contribution reports and return to your University Grants Officer and to:

Patricia Watts, Grants Officer FAA Centers of Excellence Program Director William J. Hughes Technical Center Atlantic City International Airport, NJ 08405

FAA AST COE CST EXECUTIVE COMMITTEE TELECON #10 - MONDAY, 11 MARCH 2013

SCHOOL	PRIMARY	SECONDARY	ADDITIONAL
CU	☐ Dr. David Klaus	☐ Dr. Penina Axelrad	 □ Dr. George Born □ Dr. Tim Fuller-Rowell □ Dr. Dan Scheeres □ Mr. Brad Cheetham
FIT	☐ Dr. Dan Kirk	☐ Dr. Sam Durrance	□ Dr. Nat Villaire□ Dr. Tristan Fiedler
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0.1 Executive Committee Meeting Information

- Dial-In #: 712-432-0075, Participant Access Code: 141648#
- The next telecon is scheduled for April 08, 2013, 1-2pm EDT.

0.2 Proposed Order of Major Topics of Discussion

- Starters (Administrivia)
 Self-Governance Subcommittee Report
- 3. Collaboration Subcommittee Report
- 4. Strategic Planning Subcommittee Report
- 5. Any Other Business

0.3 Attachments

Guideline for Establishing a Task with an Affiliate Member in the COE CST.

1. STARTERS (ADMINISTRIVIA)

1.1 FY13Q2 Quarterly Reporting Alert

- The next batch of quarterly reports will cover the period of January 1 March 31, 2013.
- The deadline for entering the FY13Q2 quarterly report information is April 30, 2013.

1.2 Administrative Process Document

Carol is putting together an administrative "How To" document for quick reference of processes such as (i) How to close out a task, (ii) How to submit a No Cost Extension (NCE), (iii) How to find a COE CST announcement in grants.gov... If you can think of other processes you'd like to see included, please let Carol know.

1.3 Year 2 Annual Report

 Volumes 1-3 of the COE CST Year 2 Annual Report are scheduled to be completed soon and delivered to Pat Watts before the end of March.

1.4 Planning for the Third Annual Administrative Meeting (AAM3)

- What: 2-day COE CST management and administrative meeting.
- Why: Discuss administrative topics, face-to-face meeting opportunity, conduct subcommittee activities.
- Who: Required: EC primary and/or secondary members from Member Universities, CESTAC, FAA and OAT. (See front page roster for names.) Desirable: Other Member University PIs and CESTAC members. Optional: Students, NASA members.
- Where: Current plans are to hold the meeting at the Residence Inn Atlantic City Somers Point, 900 Mays Landing Road, Somers Point, NJ 08244, (609) 927-6400, not far from the FAA William J. Hughes Technical Center, Egg Harbor Township, NJ 08234.
- When: June 11: Arrival & Reception. June 12-13: All-day Meetings. June 14: Departure.
- How? Most probably fly into Philadelphia (PHL), rent a car and drive 70 miles to the hotel.
- How Much? Airfares seem to start from \$300-\$350 for round-trip fares between PHL and MCO, DEN, SFO and IAH (based on hipmunk.com airfare search on Jan 10, 2013).
- Tentative Agenda
 - Administrative Starters
 - Quarterly Reporting Status
 - Planning for ATM3: Who (Host), Where & When (Dates), What (Format, Content, Tours)
 - Website Status: CST website and how to increase use among the group
 - Budget and Financial Topics: Recently Completed FY13 Awards, Look-Ahead to FY14 Funding
 - Affiliate Members (can Bill Sheehan attend this part of the meeting?): Solicitation Responses, Host University Responsibilities, Selection Process, Next Steps
 - CESTAC Input
 - General Comments: COE CST Summer Internship Program, Do we have minority schools we want to reach out to? Faculty mentoring?, COE CST Letterhead Design Selection, Slogan competition
 - Self-Governance Subcommittee Report Nat Villaire to provide activity/content.
 - Collaboration Subcommittee Report Tristan Fiedler to provide activity/content.
 - Strategic Planning Subcommittee Report Dave Klaus to provide activity/content.
 - Any Other Business (AOB): Suggested Cooperative Agreement Modifications
 - FAA Technical Center Tour

1.4 Website Status (Fred Bowen)

• Status of transition to new hosting company.

1.5 Budget and Finance Stuff

- SOWs of current and new COE CST tasks in FY13 Internal Solicitation of Research (ISR13) distributed.
- Current Schedule: Proposals Due: 18 March. Evaluation Complete Task Funding Selection: April 26. Notification: May 3.

1.6 Solicitation of Affiliate Members

- Deadline for submission of deadlines is March 31, 2013. Should we extend?
- It is OK if a Host University wants to claim as matching contribution some amount of time required to perform the administrative overhead activities associated with their Affiliate Members.
- In another manifestation of what I call the "Campaign in Poetry, Govern in Prose" confusion, I have answered questions about whether the universities that were referred to during the COE

CST proposal period (spring 2010) as "affiliates" with one or more of the COE CST member universities are already "Affiliate Members." Under the current definition, they are not. I would ask any of the member universities to reach out to these proposed partners and encourage them to become Affiliate Members under the current terms. Oh, and also, please let them know that it's confusing if they continue to represent themselves an "affiliates" of the COE CST.

1.7 General Comments

- New Space Journal: Please think about submitting for future issues. We'd like to get between 10-20 submissions by mid-April.
- Papers & Articles: Regarding the FAA disclaimer that should appear on all publications related to COE CST activities, I have two questions: (1) How to make sure it is actually included, and (2) What about adding a sentence identifying the Primary Industry Partners as well?

2. SELF-GOVERNANCE SUBCOMMITTEE REPORT

- FIT Nat Villaire*
- UF Norm Fitz-Coy

2.1 Activities

Nat will lead the "team" (of two!) and will present results of this subcommittee at AAM3.

3. COLLABORATION SUBCOMMITTEE REPORT

- UF Mark Sheplak
- NMSU Pat Hynes
- CU Dan Scheeres
- FIT Tristan Fiedler*
- NMT Warren Ostergren
- CU Penny Axelrad
- UTMB Jim Vanderploeg

3.1 CESTAC Report

• Tristan is the EC POC to CESTAC.

3.2 Activities

Tristan will head this group.

4. STRATEGIC PLANNING SUBCOMMITTEE REPORT

- CU Dave Klaus*
- SU Sigrid Close
- NMT Andrei Zagrei FSU Billie Oates

- FIT Dan Kirk
- SU Juan Alonso
- SU Scott Hubbard

4.1 Activities

• Dave Klaus will head this group and lead a strategic analysis with initial results to be presented at the upcoming AAM3.

5. ANY OTHER BUSINESS

Attachment 1: Guideline for Establishing a Task with an Affiliate Member in the COE CST

This document is intended to provide guidance only when setting up a research task within the COE CST that has an Affiliate Member component. These guidelines are for consideration only and should not be considered as "official FAA policy".

An affiliate member is defined as "An Affiliate University Member or Affiliate Industry Member (generally referred to as an Affiliate Member) is distinguished by bringing their own self-funded, unique research activities to the COE CST network". Affiliate Members are associated with the COE CST through a Host University. A Host University is one of the nine COE CST Member Universities that provides a rational and meaningful linkage between the COE CST and the Affiliate Member.

When a new task is proposed with an Affiliate Member, the Host University will need to

- Submit their proposal through the standard FAA proposal process using grants.gov.
- Submit the appropriate budget (even if the budget is \$0).
- Submit Cash/In-Kind Match form (FAA COE In-Kind Cost Sharing) with supporting documentation from the Affiliate Member.
- Upon acceptance, the task will be tracked in OMIS and the Affiliate Member will be setup as a "Primary Partner" permitting the OMIS to track the matching contributions.
- Establish a method of receiving financial reports from the Affiliate Member that will satisfy the Host University auditor(s) and their State regulations.
- Be responsible for entering the matching contributions in OMIS.

Below is more information for review and is provided for clarification.

- FAA COE In-Kind Cost Sharing Guidance
- OMB Circular A-110 Section .23 Cost Sharing or Matching
- FAA Centers of Excellence Matching Contribution Form

FAA COE In-Kind Cost Sharing Guidance

Please refer to OMB Circular A-110 Section .23 Cost Sharing or Matching.

Additionally, the FAA COE Matching Contribution Form is to be completed and submitted prior to award when the

- o <u>value</u> of in-kind activities are calculated (vs the cost of the contribution)
- matching contributions are based on activities that are not solely conducted for the purpose of supporting a funded COE project.

In the instance where the in-kind cost sharing activity is <u>not solely for the benefit of the proposed project</u>, the activities conducted and provided by a third-party source will be clearly defined <u>in the proposal submission</u> to justify the value of the anticipated contribution to the specific project(s).

- A. Each investigator proposing credit for such contributions will review the anticipated cost sharing plan with his/her Fiscal Officer.
- B. Prior to submission of the proposal to the FAA, the university COE member's Fiscal Officer will discuss the plan with the COE lead institution's Fiscal Officer for consideration in accordance with the lead institution's policies and procedures on cost-sharing. The university Fiscal Officer will notify the FAA COE Program Director/Grants Officer that such a proposal is under consideration and in the process of being submitted.
- C. In applying the value of a contribution versus the direct cost of contribution, the interpretation of the Fiscal Officer representing the COE Lead institution regarding the amount found to be "prudent and reasonable" will hold for all those participating on the project. The COE Lead institution is expected to conduct discussions and make a determination within 5 business days.
- D. The COE Lead institution will forward a concurrence notice to the COE Program Office with a justification for the value of the cost-share proposed.
- E. The FAA COE Program Director will consider each request on a case-by-case basis. The expectation is that all COE members and Leads will be prudent in developing value statements and formulas.
- F. In keeping with Legislative intent and the spirit of COE enabling legislation, Public Law 101-508, the FAA will not allow the in-kind nonspecific contributions that might be a result of one project to satisfy the matching obligations for an entire agreement Phase or for a significant number of other funded projects.

Although the COE Fiscal Officers and ultimately the FAA may accept the value of the documented contribution as reasonable, allowable and allocable, each university is subject to final acceptance by its own auditor(s). Any penalty imposed by a cognizant auditing agency is the sole responsibility of the recipient providing the contribution and the associated documentation (Prime or Sub recipient).

OMB Circular A-110 Section .23 Cost Sharing or Matching

- (a) All contributions, including cash and third party in-kind, shall be accepted as part of the recipient's cost sharing or matching when such contributions meet all of the following criteria.
- (1) Are verifiable from the recipient's records.
- (2) Are not included as contributions for any other federally-assisted project or program.
- (3) Are necessary and reasonable for proper and efficient accomplishment of project or program objectives.
- (4) Are allowable under the applicable cost principles.
- (5) Are not paid by the Federal Government under another award, except where authorized by Federal statute to be used for cost sharing or matching.
- (6) Are provided for in the approved budget when required by the Federal awarding agency.
- (7) Conform to other provisions of this Circular, as applicable.
- (b) Unrecovered indirect costs may be included as part of cost sharing or matching only with the prior approval of the Federal awarding agency.
- (c) Values for recipient contributions of services and property shall be established in accordance with the applicable cost principles. If a Federal awarding agency authorizes recipients to donate buildings or land for construction/facilities acquisition projects or long-term use, the value of the donated property for cost sharing or matching shall be the lesser of (1) or (2).
- (1) The certified value of the remaining life of the property recorded in the recipient's accounting records at the time of donation.
- (2) The current fair market value. However, when there is sufficient justification, the Federal awarding agency may approve the use of the current fair market value of the donated property, even if it exceeds the certified value at the time of donation to the project.
- (d) Volunteer services furnished by professional and technical personnel, consultants, and other skilled and unskilled labor may be counted as cost sharing or matching if the service is an integral and necessary part of an approved project or program. Rates for volunteer services shall be consistent with those paid for similar work in the recipient's organization. In those instances in which the required skills are not found in the recipient organization, rates shall be consistent with those paid for similar work in the labor market in which the recipient competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, allowable, and allocable may be included in the valuation.
- (e) When an employer other than the recipient furnishes the services of an employee, these services shall be valued at the employee's regular rate of pay (plus an amount of fringe benefits that are

reasonable, allowable, and allocable, but exclusive of overhead costs), provided these services are in the same skill for which the employee is normally paid.

- (f) Donated supplies may include such items as expendable equipment, office supplies, laboratory supplies or workshop and classroom supplies. Value assessed to donated supplies included in the cost sharing or matching share shall be reasonable and shall not exceed the fair market value of the property at the time of the donation.
- (g) The method used for determining cost sharing or matching for donated equipment, buildings and land for which title passes to the recipient may differ according to the purpose of the award, if (1) or (2) apply.
- (1) If the purpose of the award is to assist the recipient in the acquisition of equipment, buildings or land, the total value of the donated property may be claimed as cost sharing or matching.
- (2) If the purpose of the award is to support activities that require the use of equipment, buildings or land, normally only depreciation or use charges for equipment and buildings may be made. However, the full value of equipment or other capital assets and fair rental charges for land may be allowed, provided that the Federal awarding agency has approved the charges.
- (h) The value of donated property shall be determined in accordance with the usual accounting policies of the recipient, with the following qualifications.
- (1) The value of donated land and buildings shall not exceed its fair market value at the time of donation to the recipient as established by an independent appraiser (e.g., certified real property appraiser or General Services Administration representative) and certified by a responsible official of the recipient.
- (2) The value of donated equipment shall not exceed the fair market value of equipment of the same age and condition at the time of donation.
- (3) The value of donated space shall not exceed the fair rental value of comparable space as established by an independent appraisal of comparable space and facilities in a privately-owned building in the same locality.
- (4) The value of loaned equipment shall not exceed its fair rental value.
- (5) The following requirements pertain to the recipient's supporting records for in-kind contributions from third parties.
- (i) Volunteer services shall be documented and, to the extent feasible, supported by the same methods used by the recipient for its own employees.
- (ii) The basis for determining the valuation for personal service, material, equipment, buildings and land shall be documented.



Center of Excellence for		
Project Title:		
Please refer to OMB Circular A-110 Section.23	3 Cost Sharing or Ma	tching for allowable support.
Name:		
Title:		
Contributing Organization:		
Address:		
Telephone:	Email:	
In-kind support: (see following guidance)		
Describe Contribution:		
Period of Contribution:		
Total In-Kind Contribution:		\$
Signature:		Date:
University PI:		E-mail:
FAA Tech Monitor:		

Please include this completed form when submitting matching contribution reports and return to your University Grants Officer and to:

Patricia Watts, Grants Officer FAA Centers of Excellence Program Director William J. Hughes Technical Center Atlantic City International Airport, NJ 08405

FAA AST COE CST EXECUTIVE COMMITTEE TELECON #11 - MONDAY, 08 APRIL 2013

SCHOOL	PRIMARY	SECONDARY	ADDITIONAL
CU	☐ Dr. David Klaus	☐ Dr. Penina Axelrad	 □ Dr. George Born □ Dr. Tim Fuller-Rowell □ Dr. Dan Scheeres □ Mr. Brad Cheetham
FIT	☐ Dr. Dan Kirk	☐ Dr. Sam Durrance	□ Dr. Nat Villaire□ Dr. Tristan Fiedler
FSU	Dr. Farrukh Alvi	☐ Dr. Emmanuel Collins	□ Dr. Billy Oates
NMSU	□ Dr. Patricia Hynes		Ms. Joylynn Watkins
NMT	☐ Dr. Warren Ostergren	☐ Dr. Dave Westpfahl	□ Dr. Keith Miller□ Dr. Andrei Zagrai
su	☐ Prof. Scott Hubbard	☐ Dr. Juan Alonso	□ Dr. Sigrid Close□ Dr. Steve Rock
UCF	☐ Dr. Jay Kapat	☐ Dr. Jan Gou	☐ Dr. Ali Gordon☐ Dr. Lin An
UF	☐ Dr. Norm Fitz-Coy	☐ Dr. Mark Sheplak	
UTMB	□ Dr. Jim Vanderploeg	Dr. Richard Jennings	Dr. Tarah Castleberry
CESTAC	□ Dr. Joseph Rothenberg	Ms. Carissa Christensen	
OAT	■ Ms. Carol Gregorek	☐ Mr. Fred Bowen	
FAA AST	Mr. Ken Davidian		
FAA	□ Dr. Patricia Watts	□ Dennis Flath	☐ John Reinhart (UAS COE)
NASA	☐ Mr. Alex MacDonald	☐ Dr. Dan Rasky	☐ Bruce Pittman

0.1 Executive Committee Meeting Information

- Dial-In #: 712-432-0075, Participant Access Code: 141648#
- The next telecon is scheduled for May 13, 2013, 1-2pm EDT.
 - May have to be moved up to May 6, 2012, 1-2pm EDT. Stay tuned.

0.2 Attachments

- 1. AAM3 Lodging Details.
- 2. Administrative Tasks.

1. STARTERS (ADMINISTRIVIA)

1.1 FY13Q2 Quarterly Reporting Alert

• The next batch of quarterly reports covering the period of January 1 – March 31, 2013, should be input to OMIS by April 30, 2013.

1.2 Administrative Process Document

A draft document of Administrative processes has been developed for the following processes:

- 1. How to Submit a COE CST Research Grant Proposal
- 4. How to Do Quarterly Reporting

2. How to request a No Cost Extension

- 5. How to Close-Out a Research Task
- 3. How to Document Cost Share Contributions
- 6. How to Initiate an Affiliate Membership
- Details are given in Attachment 2. If you can think of other processes you'd like to see included, please let Carol know.

1.3 Year 2 Annual Report

 Volumes 1-3 of the COE CST Year 2 Annual Report are scheduled to be completed soon and delivered to Pat Watts before the end of March.

1.4 Planning for the Third Annual Administrative Meeting (AAM3)

- WHAT: 2-day COE CST management and administrative meeting.
- WHEN: June 11: Arrival & Reception. June 12-13: All-day Meetings. Departure late afternoon on June 13 or early morning June 14.
- WHY: Discuss administrative topics, face-to-face meeting opportunity, conduct subcommittee activities.
- WHO: Required: EC primary and/or secondary members from Member Universities, CESTAC, FAA and OAT. (See front page roster for names.) Desirable: Other Member University PIs and CESTAC members. Optional: Students, NASA members.
- WHERE: Current plans are to hold the meeting at the Residence Inn Atlantic City Somers Point, 900 Mays Landing Road, Somers Point, NJ 08244, (609) 927-6400.
 - Reservations can be made by phone at 1-888-236-2427, the Marriott Reservation line.
 - The Residence Inn is listed under Atlantic City, Mays Landing Road.
 - The group code is: FAACST.
 - Refer to Attachment 2 for more details.
- HOW? Most probably fly into Philadelphia (PHL), rent a car and drive 70 miles to the hotel.
- HOW MUCH? Airfares seem to start from \$300-\$350 for round-trip fares between PHL and MCO, DEN, SFO and IAH (based on hipmunk.com airfare search on Jan 10, 2013).

1.5 Website Status (Fred Bowen)

- The move date for the COE CST web site has been tentatively set for the end of May, 2013.
- During that time, the web site will be unavailable for 24 to 48 hours to re-propagate the domain name to a new IP address.

1.6 Budget and Finance Stuff

- Current ISR Schedule: Proposals Due: 18 March. Evaluation Complete Task Funding Selection: April 26. Notification: May 3.
- Detailed accounting exercise of all universities, all tasks, all mods:
 - 6 Completed or Near Completion: FIT, FSU, NMSU, UCF, UF, UTMB
 - 3 In Process: CU, NMT, SU

1.7 Solicitation of Affiliate Members

- Deadline for submission of deadlines is March 31, 2013. Should we extend?
- It is OK if a Host University wants to claim as matching contribution some amount of time required to perform the administrative overhead activities associated with their Affiliate Members.
- In another manifestation of what I call the "Campaign in Poetry, Govern in Prose" confusion, I have answered questions about whether the universities that were referred to during the COE CST proposal period (spring 2010) as "affiliates" with one or more of the COE CST member universities are already "Affiliate Members." Under the current definition, they are not. I would ask any of the member universities to reach out to these proposed partners and encourage them to become Affiliate Members under the current terms. Oh, and also, please let them know that it's confusing if they continue to represent themselves an "affiliates" of the COE CST.

1.8 TASK CLOSE-OUTS

ENDING SOON

PAST CLOSED OUT TASKS:

- 256-UTMB (June 30, 2013):
- 297-FSU (May 31, 2013):
- 255-UTMB (June 30, 2013):
 181-UTMB (Dec 31, 2012):
 - 182-UTMB (Dec 31, 2011):
 - 183-UTMB (Dec 31, 2012):
 - 281-CU (August 31, 2012):
 - 282-FIT (Dec 31, 2011):
 - 283-FSU (March 31, 2012):
- 284-NMSU (May 31, 2012):
- 286-SU (Dec 31, 2011):
- 287-UCF (Sept 30, 2012):
- 288-UF (Dec 31, 2012):
- 289-UTMB (August 17, 2012):

1.9 General Comments

- New Space Journal: Please think about submitting for future issues. We'd like to get between 10-20 submissions by mid-April.
- Papers & Articles: Regarding the FAA disclaimer that should appear on all publications related to COE CST activities, I have two questions: (1) How to make sure it is actually included, and (2) What about adding a sentence identifying the Primary Industry Partners as well?

2. SELF-GOVERNANCE SUBCOMMITTEE REPORT (LEAD, NAT VILLAIRE)

- Members
 - FIT Nat Villaire
- UF Norm Fitz-Coy
- Subcommittee Update:

3. COLLABORATION SUBCOMMITTEE REPORT (LEAD, TRISTAN FIEDLER)

- Members
 - UF Mark Sheplak
 - NMSU Pat Hynes
 - CU Dan Scheeres
- CESTAC Update:
- Subcommittee Update:
- FIT Tristan Fiedler
- NMT Warren Ostergren
- CU Penny Axelrad
- UTMB Jim Vanderploeg
- 4. STRATEGIC PLANNING SUBCOMMITTEE REPORT (LEAD, DAVE KLAUS)
- Members
 - CU Dave Klaus
- SU Sigrid Close
- NMT Andrei Zagrei FSU Billie Oates

- FIT Dan Kirk
- SU Juan Alonso
- SU Scott Hubbard
- Subcommittee Update: Dave has been working on a draft for the strategic plan which he hopes will be sent out to the committee soon. We should have something more to report at the next telecon. A reasonably vetted baseline should be in place by the summer admin meeting for discussion

5. ANY OTHER BUSINESS

Attachment 1: AAM2 Lodging Details

Room Block Information

• Check-In Date: June 11

• Check-Out Date: late June 13 or early June 14, 2013

• Group Code: FAACST

• Room Block Expiration Date: May 12, 2013

Reservations by Phone

• (609) 927-6400 (Somers Point)

• 1-888-236-2427 (Marriott Reservation)

Location: Marriott Residence Inn, 900 Mays Landing Rd., Somers Point, NJ 08244.

Guest Rooms: \$96/night + tax

NOTE: This is "high season" for the Atlantic City area and hotels book quickly and rates increase; please make your reservation ASAP.

FAA Hospitality Room for each night and includes hors d'oeuvres and non-alcoholic beverages

NOTE: Since this is a small group, the web reservation does not function. If you choose to book your reservation from the Marriott Reservation 1-888-236-2427, the Residence Inn is listed under Atlantic City, Mays Landing Road. The group code is the same: FAACST.

Attachment 2: Draft Administrative Processes

1. How to Submit a COE CST RESEARCH GRANT PROPOSAL

- Enter www.grants.gov/
- Click on Apply for Grants
- FAA assigns each proposal a number and acknowledges receipt of each proposal
 - Proposal number must be referred to in all future correspondence concerning the proposal.
 - Provide Required Fields
- Enter CFDA 20.109
- Download Package
- Select CST New Funding Package and Download
- Complete Download Instructions and Application
- Submit

2. How to request a No Cost Extension

- Go to www.grants.gov
- Click on Apply for Grants
- Provide Required Fields
- Enter CFDA 20.109
- Download Package
- Select CST No Cost Extension Package
- Complete Download Instructions and Application
- Submit

Mandatory Requirement: Form SF424

3. How to Document Cost Share Contributions

- Refer to OMB Circular A-110 Section .23 Cost Sharing or Matching
- Complete FAA COE Matching Contribution Form
- Submit prior to award when
 - Value of in-kind activities are calculated (vs cost of contribution)
 - Based on activities not solely used for supporting a funded COE project

In the instance where the in-kind cost sharing activity is not solely for the benefit of the proposed project, the activities conducted and provided by a third-party source will be clearly defined in the proposal submission to justify the value of the anticipated contribution to the specific project(s).

A. Each investigator proposing credit for such contributions will review the anticipated cost sharing plan with his/her Fiscal Officer.

B. Prior to submission of the proposal to the FAA, the university COE member's Fiscal Officer will discuss the plan with the COE lead institution's Fiscal Officer for consideration in accordance with the lead institution's policies and procedures on cost-sharing. The university Fiscal Officer will notify the FAA COE Program Director/Grants Officer that such a proposal is under consideration and in the process of being submitted.

C. In applying the value of a contribution versus the direct cost of contribution, the interpretation of the Fiscal Officer representing the COE Lead institution regarding the amount found to be "prudent and reasonable" will hold for all those participating on the project. The COE Lead institution is expected to conduct discussions and make a determination within 5 business days.

- D. The COE Lead institution will forward a concurrence notice to the COE Program Office with a justification for the value of the cost-share proposed.
- E. The FAA COE Program Director will consider each request on a case-by-case basis. The expectation is that all COE members and Leads will be prudent in developing value statements and formulas.

F. In keeping with Legislative intent and the spirit of COE enabling legislation, Public Law 101-508, the FAA will not allow the in-kind nonspecific contributions that might be a result of one project to satisfy the matching obligations for an entire agreement Phase or for a significant number of other funded projects.

Although the COE Fiscal Officers and ultimately the FAA may accept the value of the documented contribution as reasonable, allowable and allocable, each university is subject to final acceptance by its own auditor(s). Any penalty imposed by a cognizant auditing agency is the sole responsibility of the recipient providing the contribution and the associated documentation (Prime or Sub recipient).

4. How to Do Quarterly Reporting

Quarterly reports cover three month calendar increments

- Q1 October 1 December 31, Due: Jan 31, 2014
- Q2 January 1 March 31, Due: April 30, 2013
- Q3 April 1 June 30, Due: Jul 31, 2013
- Q4 July 1 September 30, Due: Oct 31, 2013

Deadline for entering quarterly information is 30 days after the quarter ends

- Research accomplishments (measured against the proposed goals and objectives):
- Citation for written publications:
- Journal articles published or in press:
- Journal articles submitted:
- Conference papers submitted and accepted:
- · Patents:
- Follow-on research proposals submitted:
- Transition of research results:
- Plans for next quarter:

5. How to Close-Out a Research Task

Project Closeout Requirements: The PI is responsible for completing all required documentation. Orion America will prepare for the PI detailed reports based on information provided by the PI and entered into OMIS data fields. By forwarding a completed form 9550.5 to Orion, the PI is authorizing Orion to gather the required data.

- Due Date: 90 days after expiration of award
- Send to: FAA Technical Monitor designated on FAA award letter,
- The closeout requires the FAA Form 9550.5 be sent to Technical Director (Ken Davidian)
- TD forwards to Tech Monitors for concurrence
- TMs return approved form to TD
- TD signs off and forwards to COE Program Director (Pat Watts)
- COE Program Director approves and sends to OAT
- OAT pulls any necessary reports from the OMIS
- OAT sends complete electronic file to TD, PI, COE Program Director
- Completed project information resides in two places: COE Program Director and the OMIS where it awaits audit, etc.

- 5 printed copies to COE Program Director (Dr. Patricia Watts)
- Electronic file to Technical Director (Ken Davidian), OAT Contract Support (Carol Gregorek),
- Completed FAA Form 9550-5 "Final Project Report" (on the web at www.faa.gov.documentLibrary/media/form/faa9550-5.pdf) with attachments below:
- Orion America (OAT) compiles for the PI retrieved from OMIS
- Abstracts of Theses
- Publication Citations (published and planned) (5 printed copies) (including Title, Journal or other reference, Date, Author)
- Scientific Collaborators (including Co-Investigators, Research Assistants, Associate Professors, Graduate Students, Associate Members and short statement of their participation, and others as appropriate)
- Inventions or Propriety Data (Patents and status)
- Technical Summary
- · Additional Material required under the award instrument
- · OMIS Report showing no outstanding reports due
- Budget sheet reflecting +/- balance
- · Cost share with sources
- Short narrative discussing value of project and results
- Nationality report (including Name and Country of Origin)
- Completed SF 425 Financial Close out prepared by University Fiscal office

Final Unobligated Balance. FAA has a reversionary interest in the unobligated balance of a grant upon expiration or completion of the grant. Based on final disbursements reported on the SF-272, the final unobligated balance is to be computed by FAA and reported to the grantee. If the grantee's funding has been fully advanced and the unobligated balance deduction results in a negative balance, the grantee must refund by check, payable to FAA, the amount of the negative balance.

Compliance with Reporting Requirements. The FAA Technical Center accounting section monitors report submissions to ensure that the requirements for final disbursement information are fulfilled. The technical monitor is responsible for assuring that the final project reports on prior, expired awards have been submitted by principal investigators before new awards are made to those individuals.

Grant Closeout. Grant closeout is the process by which FAA determines that all applicable administrative actions and all required work of the grant are complete. Grants are closed upon receipt of final disbursement information in the final project report, and after determination that any other administrative requirements in the grant instrument have been met. In the event a final audit has not been performed prior to the closeout of the grant, FAA reserves the right to recover appropriate amounts after fully considering the recommendations on disallowed costs resulting from the final audit.

6. How to Initiate an Affiliate Membership

When a new task is proposed with an Affiliate Member, the Host University shall

- Submit their proposal through the standard FAA proposal process using grants.gov
- Submit the appropriate budget (even if the budget is \$0)
- Submit Cash/In-Kind Match form (FAA COE In-Kind Cost Sharing) with supporting documentation from the Affiliate Member
- Upon acceptance, the task will be tracked in OMIS and the Affiliate Member will be setup as a "Primary Partner" permitting the OMIS to track the matching contributions
- Establish a method of receiving financial reports from the Affiliate Member that will satisfy the Host University auditor(s) and their State regulations
- Be responsible for entering the matching contributions in OMIS

- For more information
- FAA COE In-Kind Cost Sharing Guidance
 OMB Circular A-110 Section .23 Cost Sharing or Matching
 FAA Centers of Excellence Matching Contribution Form

FAA AST COE CST EXECUTIVE COMMITTEE TELECON #12 - MONDAY, 06 MAY 2013

SCHOOL	PRIMARY	SECONDARY	ADDITIONAL
CU	☐ Dr. David Klaus	☐ Dr. Penina Axelrad	 □ Dr. George Born □ Dr. Tim Fuller-Rowell □ Dr. Dan Scheeres □ Mr. Brad Cheetham
FIT	☐ Dr. Dan Kirk	☐ Dr. Sam Durrance	□ Dr. Nat Villaire□ Dr. Tristan Fiedler
FSU	☐ Dr. Farrukh Alvi	☐ Dr. Emmanuel Collins	□ Dr. Billy Oates□ Dr. Rajan Kumar
NMSU	□ Dr. Patricia Hynes		Ms. Joylynn Watkins
NMT	☐ Dr. Warren Ostergren	☐ Dr. Dave Westpfahl	□ Dr. Keith Miller□ Dr. Andrei Zagrai
SU	☐ Prof. Scott Hubbard	☐ Dr. Juan Alonso	□ Dr. Sigrid Close□ Dr. Steve Rock
UCF	☐ Dr. Jay Kapat	☐ Dr. Jan Gou	☐ Dr. Ali Gordon☐ Dr. Lin An
UF	☐ Dr. Norm Fitz-Coy	□ Dr. Mark Sheplak	
UTMB	Dr. Jim Vanderploeg	Dr. Tarah Castleberry	Dr. Charles Mathers
CESTAC	Dr. Joseph Rothenberg	Ms. Carissa Christensen	
OAT	☐ Ms. Carol Gregorek	☐ Mr. Fred Bowen	
FAA AST	☐ Mr. Ken Davidian		
FAA	□ Dr. Patricia Watts	□ Dennis Flath	☐ John Reinhart (UAS COE)
NASA	☐ Mr. Alex MacDonald	☐ Dr. Dan Rasky	☐ Bruce Pittman

0.1 Executive Committee Meeting Information

- Dial-In #: 712-432-0075, Participant Access Code: 141648#
- The next EC Committee Meeting will be at the AAM3. (Details in section 1.4 of these notes.)
- The next telecom is scheduled for July 08, 2013, 1-2pm EDT.

0.2 Attachments

1. AAM3 Lodging Details

2. Draft Schedule for AAM3

1. STARTERS (ADMINISTRIVIA)

1.1 FY13Q2 Quarterly Reporting Alert

- The current batch of quarterly reports, covering the period of January 1 March 31, 2013, were due in OMIS on April 30, 2013.
 - # TASKS WITH PI-SUBMITTED QUARTERLIES DONE: 12
 - # TASKS WITH PARTIAL INPUT: 10
 - # TASKS WITH NO INPUT: 8
 - # TASKS WITH TM STATUSES DONE: 0
- ☐ Pls: Please begin or complete inputting your quarterly report information into OMIS.
- ☐ TMs: Please evaluate your tasks ("turning them from white to green, yellow, or red").
- July 31, 2013 is the due date for inputting the next batch of quarterly reports covering the period of April 1 June 30, 2013.

1.2 Administrative Process Document

• I've been getting some positive feedback on the Administrative processes document.

• I will be including these processes into the next version of the COE CST Management Plan (which will be renamed as the COE CST Management & Administration Plan).

1.3 Year 2 Annual Report

- Volumes 1-3 of the COE CST Year 2 Annual Report were delivered to Pat Watts.
 - Vol 1: http://db.tt/eOb3bC4L
- Vol 3: http://db.tt/BG4H7Hb0
- Vol 2: http://db.tt/ppMQZfZS
- Executive Summary: http://bit.ly/COECSTYr2ExecSumm

1.4 Planning for the Third Annual Administrative Meeting (AAM3)

- All the details for the AAM3 are given in Attachment 1.
- The current draft schedule grid is given in Attachment 2.

1.5 Website Status (Fred Bowen)

- The move date for the COE CST web site has been tentatively set for the end of May, 2013.
- During that time, the web site will be unavailable for 24 to 48 hours to re-propagate the domain name to a new IP address.

1.6 Budget and Finance Stuff

- Current ISR Schedule: Task Funding Prioritization: mid-May-ish. In the worst possible case, no funding decisions will be made until mid-September (approaching the end of FY13).
 - Please note that there is a high degree of uncertainty regarding all funding situations but that doesn't mean nothing is afoot. I just can't talk about it.
- Detailed accounting exercise of all universities, all tasks, all mods:
 - ALL DATA VALIDATED BY UNIVERSITY AND AST: CU, FSU, NMSU
 - DATA YET TO BE VALIDATED: UTMB, FIT, NMT, SU, UCF, UF

1.7 Affiliate Members

1.7.1 STATUS OF CURRENT SOLICITATION

- Tristan will soon be sending to all PIs an email describing the two-stage review process and the initial set of submissions of organizations to become Affiliate Members. Please review the email immediately and send any questions or comments to Tristan. Also, please conduct the first-tier review as described in the email as soon as practicable.
- The original deadline for submission was March 31, 2013 but we are still getting expressions
 of interest and applications. I plan to send out an email blast to extend the deadline through
 the end of June.

1.7.2 FORMAL ASSOCIATION OF GOV'T ORGANIZATIONS WITH COE CST

- Below is a simple set of "gives and gets" to be as inclusive as possible and to minimize the barriers of bringing other interested US government organizations into the COE CST network.
- COE CST "Gives"
 - Extending invitations to the gov't orgs to our technical interchange meetings (e.g., periodic virtual meetings as well as our annual technical meeting in November, etc.).
 - Providing a speaking slot in the program to present their contributions to the commercial space research community.
- COE CST "Gets":
 - Formal association allowing the use of the organization name in printed and presented materials as Associated Government Organizations (or something like that... it's just a working moniker for now). Logo use would be great, but is not requested nor required.
 - The voluntary participation by representatives of the gov't organization at the TIMs.

1.8 TASK CLOSE-OUTS

 Carol Gregorek is working to compile all the necessary documentation and information for orderly close out of tasks that have been completed in the past, including:

ENDING SOON

PAST CLOSED OUT TASKS:

- 255-UTMB (June 30, 2013)
- 256-UTMB (June 30, 2013)
- 297-FSU (May 31, 2013):
- 181-UTMB (Dec 31, 2012)
- 182-UTMB (Dec 31, 2011)
- 183-UTMB (Dec 31, 2012)
- 281-CU (August 31, 2012):
- 282-FIT (Dec 31, 2011):
- 283-FSU (March 31, 2012):
- 284-NMSU (May 31, 2012):
- 286-SU (Dec 31, 2011):
- 287-UCF (Sept 30, 2012)
- 288-UF (Dec 31, 2012):
- 289-UTMB (August 17, 2012)

1.9 General Comments

- New Space Journal: Please think about submitting for future issues. We'd like to get between 10-20 submissions by mid-April.
- Papers & Articles: Regarding the FAA disclaimer that should appear on all publications related to COE CST activities, I have two questions: (1) How to make sure it is actually included, and (2) What about adding a sentence identifying the Primary Industry Partners as well?

2. SELF-GOVERNANCE SUBCOMMITTEE REPORT (LEAD, NAT VILLAIRE)

- Members
 - FIT Nat Villaire
- UF Norm Fitz-Coy
- Subcommittee Update:

3. COLLABORATION SUBCOMMITTEE REPORT (LEAD, TRISTAN FIEDLER)

- Members
 - UF Mark Sheplak
 - NMSU Pat Hynes
 - CU Dan Scheeres
- CESTAC Update:
- Subcommittee Update:
- FIT Tristan Fiedler
- NMT Warren Ostergren
- CU Penny Axelrad
- UTMB Jim Vanderploeg
- 4. STRATEGIC PLANNING SUBCOMMITTEE REPORT (LEAD, DAVE KLAUS)
- Members
 - CU Dave Klaus
- SU Sigrid Close
- NMT Andrei Zagrei FSU Billie Oates

- FIT Dan Kirk
- SU Juan Alonso
- SU Scott Hubbard
- Subcommittee Update: Dave has been working on a draft for the strategic plan which he hopes will be sent out to the committee soon. We should have something more to report at the next telecon. A reasonably vetted baseline should be in place by the summer admin meeting for discussion

5. ANY OTHER BUSINESS

Attachment 1: AAM3 Lodging Details

- WHAT: 2-day COE CST management and administrative meeting.
- WHEN: June 11: Arrival & Reception. June 12-13: All-day Meetings. Departure late afternoon on June 13 or early morning June 14. (See Attachment 2 for current schedule grid.)
- WHY: Discuss administrative topics, face-to-face meeting opportunity, conduct subcommittee activities.
- WHO:
 - Required: EC primary and/or secondary members from Member Universities, CESTAC, FAA and OAT. (See telecom notes roster for names.)
 - Desirable: Other Member University PIs and CESTAC members.
 - Optional: Students, members of other USG organizations.
- WHERE: Current plans are to hold the meeting at the Residence Inn Atlantic City Somers Point, 900 Mays Landing Road, Somers Point, NJ 08244, (609) 927-6400.
 - Reservations can be made by phone at 1-888-236-2427, the Marriott Reservation line.
 - The Residence Inn is listed under Atlantic City, Mays Landing Road.
 - The group code is: FAACST.
 - Refer to Attachment 2 for more details.
- HOW? Most probably fly into Philadelphia (PHL), rent a car and drive 70 miles to the hotel.
- HOW MUCH? Airfares seem to start from \$300-\$350 for round-trip fares between PHL and MCO, DEN, SFO and IAH (based on hipmunk.com airfare search on Jan 10, 2013).

HOTEL INFORMATION

- Location: Marriott Residence Inn, 900 Mays Landing Rd., Somers Point, NJ 08244.
- Guest Rooms: \$96/night + tax

ROOM BLOCK INFORMATION

- Check-In Date: June 11
- Check-Out Date: late June 13 or early June 14, 2013
- Group Code: FAACST
- Room Block Expiration Date: May 12, 2013

RESERVATIONS BY PHONE

- (609) 927-6400 (Somers Point)
- 1-888-236-2427 (Marriott Reservation)
- NOTE: This is "high season" for the Atlantic City area and hotels book quickly and rates increase; please make your reservation ASAP.
- FAA Hospitality Room for each night and includes hors d'oeuvres and non-alcoholic beverages
- NOTE: Since this is a small group, the web reservation does not function. If you choose to book your reservation from the Marriott Reservation 1-888-236-2427, the Residence Inn is listed under Atlantic City, Mays Landing Road. The group code is the same: FAACST.

Attachment 2: AAM3 Current Draft Schedule Grid

DRAFT SCHEDULE FOR THE COE CST THIRD ANNUAL ADMINISTRATIVE MEETING (AAM3)

	I HIRD ANNUAL ADMINISTRATIVE MEETING (AAMS)					
	Tuesday, June 11, 2013		Wednesday, June 12, 2013		Thursday, June 13, 2013	
9:00		9:00	Welcome & Introduction Ken Davidian	9:00	Self-Governance Subcommittee Nat Villaire	9:00
9:30		9:30	FAA COE Overview Pat Watts	9:30	Strategic Planning Subcommittee Dave Klaus	9:30
10:00		10:00	COE CST Annual Report & Mgt Plan Ken Davidian	10:00	Collaboration Coordination Subcommittee Tristan Fiedler	10:00
10:30		10:30	Break	10:30	Break	10:30
11:00		11:00	Administrative Procedures Ken Davidian	11:00	Spill-over from Morning Topics Entire Group	11:00
11:30		11:30	Man-Rating of Comm'l Space Vehicles Jim Duffy, FAA AST	11:30	CA Modifications Entire Group	11:30
12:00		12:00	Lunch	12:00	Lunch	12:00
12:30		12:30	Lunch	12:30	Lunch	12:30
13:00		13:00	Lunch	13:00	Lunch	13:00
13:30		13:30	Affiliate Membership Discussion Ken Davidian, w/Bill Sheehan	13:30	General Discussion - Part 2 Entire Group	13:30
14:00		14:00	COE CST Website Update Fred Bowen	14:00	Conclusion & Adjournment Ken Davidian	14:00
14:30	Tour of the FAA Tech Center	14:30	Break	14:30	Break	14:30
15:00	Technical Discussions with FAA Tech Ctr Personnel	15:00	Budget and Financial Topics Ken Davidian	15:00		15:00
15:30		15:30	Collaboration Coordination Office Tristan Fiedler	15:30		15:30
16:00		16:00	General Discussion - Part 1 Entire Group	16:00		16:00
16:30		16:30	Break	16:30	Break	16:30
17:00		17:00	CESTAC Report Ken Davidian	17:00		17:00
17:30	Welcome Reception	17:30	CESTAC Report Ken Davidian	17:30		17:30
18:00	(Residence Inn)	18:00		18:00		18:00
18:30		18:30		18:30		18:30
19:00		19:00	Group Dinner at Local	19:00		19:00
19:30	Group Dinner at Local	19:30	Restaurant	19:30		19:30
20:00	Restaurant	20:00		20:00		20:00
20:30		20:30		20:30		20:30

FAA AST COE CST EXECUTIVE COMMITTEE TELECON #14 - MONDAY, 08 JULY 2013

SCHOOL	PRIMARY	SECONDARY	ADDITIONAL
CU	☐ Dr. David Klaus	☐ Dr. Penina Axelrad	 □ Dr. George Born □ Dr. Tim Fuller-Rowell □ Dr. Dan Scheeres □ Mr. Brad Cheetham
FIT	☐ Dr. Dan Kirk	☐ Dr. Sam Durrance	□ Dr. Nat Villaire□ Dr. Tristan Fiedler
FSU	☐ Dr. Farrukh Alvi	☐ Dr. Emmanuel Collins	□ Dr. Billy Oates□ Dr. Rajan Kumar
NMSU	□ Dr. Patricia Hynes		Ms. Joylynn Watkins
NMT	☐ Dr. Warren Ostergren	☐ Dr. Dave Westpfahl	□ Dr. Keith Miller□ Dr. Andrei Zagrai
SU	☐ Prof. Scott Hubbard	☐ Dr. Juan Alonso	□ Dr. Sigrid Close□ Dr. Steve Rock
UCF	☐ Dr. Jay Kapat	☐ Dr. Jan Gou	☐ Dr. Ali Gordon☐ Dr. Lin An
UF	☐ Dr. Norm Fitz-Coy	□ Dr. Mark Sheplak	
UTMB	Dr. Jim Vanderploeg	Dr. Tarah Castleberry	Dr. Charles Mathers
CESTAC	Dr. Joseph Rothenberg	Ms. Carissa Christensen	
OAT	☐ Ms. Carol Gregorek	☐ Mr. Fred Bowen	
FAA AST	☐ Mr. Ken Davidian		
FAA	□ Dr. Patricia Watts	Dennis Flath	☐ John Reinhart (UAS COE)
NASA	☐ Mr. Alex MacDonald	☐ Dr. Dan Rasky	☐ Bruce Pittman

0.1 Executive Committee Meeting Information

- Dial-In #: 712-432-0075, Participant Access Code: 141648#
- The next telecom is scheduled for August 12, 2013, 1-2pm EDT.

0.2 Attachments

1. AAM3 Lodging Details

2. Draft Schedule for AAM3

1. STARTERS (ADMINISTRIVIA)

1.1 FY13Q3 Quarterly Reporting Alert

- The current batch of quarterly reports, covering the period of April 1 June 30, 2013, are due in OMIS on July 31, 2013.
 - # TASKS WITH PI-SUBMITTED QUARTERLIES DONE:
 - # TASKS WITH PARTIAL INPUT:
 - # TASKS WITH NO INPUT:
 - # TASKS WITH TM STATUSES DONE:
- ☐ Pls: Please begin or complete inputting your quarterly report information into OMIS.
- ☐ TMs: Please evaluate your tasks ("turning them from white to green, yellow, or red").

1.2 Third Annual Administrative Meeting Report

- The latest draft of the AAM3 Final Report (filesize = 12.8MB) is available on the web at http://db.tt/XKf6a2Xs.
- Please download, review and provide comments by July 22. At that time I will incorporate all changes and release the final version.
- Action Items from the AAM3 include the following:

Ш	Carol Gregorek should provide samples of technical quarterly reports to the COE CST PIs
	with an appropriate level of detail so PIs can provide text in a more uniform fashion.
	COE CST PIs should provide, to the greatest extent possible and without violating any
	copyright laws, electronic versions of conference papers and/or journal articles, or links to
	these papers.
	All COE CST members (staff, PIs and students) are requested to provide input of ways to
	improve the COE CST web site.
	ALL PRINCIPAL INVESTIGATORS AND STUDENTS FROM ALL MEMBER
	UNIVERSITIES SHOULD PLAN ON ATTENDING THE ATM3
	Czech Tech University - ask if they have received funded research in space activity; Do they
	have resources available to apply to contributed research to the COE CST. CU may be
	interested.
	ERAU w/ UCF - ERAU must provide SOW NOT PASSING PHASE 1
	Final Frontier - CU & UTMB to explore Host roles
	NEAR SPACE CORP Tentative Approval pending SOW & P.I.
	PENN STATE UNIV - a. GLXP not consistent with COE CST research; b. Original
	application contained areas that appear to be of interest to COE CST; c. To be
	reconsidered, please provide SOW consistent with original application along with PI
	PREVAILANCE - To be reconsidered, please provide SOW consistent with research goals
	of COE CST
	SYSENEX - a. Create SOW addressing state of the art questions in risk management with
	specific research consistent with COE CST
	, , ,
	to provide comment to Nat Villaire as soon as practicable.
	Tristan should coordinate a telecom with CESTAC leadership and FAA AST to discuss the
	report findings.
	All COE CST PIs should review and provide comment on the requirements presented to
	Dave Klaus as soon as practicable.

1.3 Planning for the Third Annual Technical Meeting (ATM3)

- Doodle poll results based on 11 responses to date indicate the best dates are Oct 28-31.
 - Oct 28 Day 0: Travel day, evening reception.
 - Oct 29 Day 1: ATM3 Day 1.
 - Oct 30 Day 2: ATM3 Day 2.
 - Oct 31 Day 3: Travel day.

1.5 Website Status (Fred Bowen)

•

1.6 Budget and Finance Stuff

No new information.

1.7 Affiliate Members

1.7.1 CANDIDATES PAST FIRST REVIEW, AWAITING SECOND REVIEW

- NASTAR Center with host UTMB.
- Baylor College of Medicine with host UTMB.
- University of Nebraska Lincoln with host NMSU.
- SatWest with host NMSU.
- ERAU with host NMSU.

1.7.2 OTHER ACTIVITIES

1.8 TASK CLOSE-OUTS

 Carol Gregorek is working to compile all the necessary documentation and information for orderly close out of tasks that have been completed in the past, including:

ENDING SOON

PAST CLOSED OUT TASKS:

- 255-UTMB (June 30, 2013)
- 256-UTMB (June 30, 2013)
- 297-FSU (May 31, 2013):
- 181-UTMB (Dec 31, 2012)
- 182-UTMB (Dec 31, 2011)183-UTMB (Dec 31, 2012)
- 281-CU (August 31, 2012):
- 282-FIT (Dec 31, 2011):
- 283-FSU (March 31, 2012):
- 284-NMSU (May 31, 2012):
- 286-SU (Dec 31, 2011):
- 287-UCF (Sept 30, 2012)
- 288-UF (Dec 31, 2012):
- 289-UTMB (August 17, 2012)

1.9 General Comments

2. SELF-GOVERNANCE SUBCOMMITTEE REPORT (LEAD, NAT VILLAIRE)

- Members
 - FIT Nat Villaire
- UF Norm Fitz-Cov
- Subcommittee Update:

3. COLLABORATION SUBCOMMITTEE REPORT (LEAD, TRISTAN FIEDLER)

- Members
 - UF Mark Sheplak
 - NMSU Pat Hynes
 - CU Dan Scheeres
- CESTAC Update:
- Subcommittee Update:
- FIT Tristan Fiedler
- NMT Warren Ostergren
- CU Penny Axelrad
- UTMB Jim Vanderploeg

4. STRATEGIC PLANNING SUBCOMMITTEE REPORT (LEAD , DAVE KLAUS)

- Members
 - CU Dave Klaus
- SU Sigrid Close
- NMT Andrei Zagrei FSU Billie Oates

- FIT Dan Kirk
- SU Juan Alonso
- SU Scott Hubbard
- Subcommittee Update: Dave has been working on a draft for the strategic plan which he hopes will be sent out to the committee soon. We should have something more to report at the next telecon. A reasonably vetted baseline should be in place by the summer admin meeting for discussion

5. ANY OTHER BUSINESS

FAA AST COE CST EXECUTIVE COMMITTEE TELECON #15 - MONDAY, 12 AUGUST 2013

SCHOOL	PRIMARY	SECONDARY	ADDITIONAL
CU	☐ Dr. David Klaus	☐ Dr. Penina Axelrad	□ Dr. George Born□ Dr. Tim Fuller-Rowell□ Dr. Dan Scheeres□ Mr. Brad Cheetham
FIT	☐ Dr. Dan Kirk	☐ Dr. Sam Durrance	Dr. Nat VillaireDr. Tristan Fiedler
FSU	☐ Dr. Farrukh Alvi	☐ Dr. Emmanuel Collins	□ Dr. Billy Oates□ Dr. Rajan Kumar
NMSU	Dr. Patricia Hynes		Ms. Joylynn Watkins
NMT	☐ Dr. Warren Ostergren	☐ Dr. Dave Westpfahl	□ Dr. Keith Miller□ Dr. Andrei Zagrai
SU	☐ Prof. Scott Hubbard	☐ Dr. Juan Alonso	□ Dr. Sigrid Close□ Dr. Steve Rock
UCF	☐ Dr. Jay Kapat	☐ Dr. Jan Gou	☐ Dr. Ali Gordon☐ Dr. Lin An
UF	□ Dr. Norm Fitz-Coy	□ Dr. Mark Sheplak	
UTMB	Dr. Jim Vanderploeg	Dr. Tarah Castleberry	□ Dr. Charles Mathers
CESTAC	Dr. Joseph Rothenberg	Ms. Carissa Christensen	
OAT	■ Ms. Carol Gregorek	☐ Mr. Fred Bowen	
FAA AST	Mr. Ken Davidian		
FAA	□ Dr. Patricia Watts	□ Dennis Flath	☐ John Reinhart (UAS COE)
NASA	☐ Mr. Alex MacDonald	☐ Dr. Dan Rasky	□ Mark Redlinger

0.1 Executive Committee Meeting Information

- Dial-In #: 712-432-0075, Participant Access Code: 141648#
- The next telecom is scheduled for September 16, 2013, 1-2pm EDT.

0.2 Attachments

1. ATM3 Details 2. ATM3 Draft Schedule 3. CESTAC Presentation

SPECIAL AGENDA ITEM: CESTAC DISCUSSION WITH JOE ROTHENBERG

• See Attachment 3 for presentation charts.

1. STARTERS (ADMINISTRIVIA)

1.1 FY13Q3 Quarterly Reporting Alert

- Status of quarterly reports, for the period April 1 June 30, 2013, due on July 31, 2013.
 - Complete: 1
- Expense report; No Progress report: 5
- Submitted: 27
- Progress report; No Expense report: 12
- Delinquent: 3
- ☐ TMs: Please evaluate your tasks ("turning them from white to green, yellow, or red").

1.2 Third Annual Administrative Meeting Report

• The draft version dated June 27, 2013 is now labeled as the final version of the report.

1.3 Third Annual Technical Meeting (ATM3)

• Details given in attachment 1 and draft schedule given in attachment 2.

1.5 Website Status (Fred Bowen)

1.6 Budget and Finance Stuff

No new information.

1.7 Affiliate Members

1.7.1 CANDIDATES PAST FIRST REVIEW, AWAITING **SECOND REVIEW**

1.7.2 OTHER ACTIVITIES

- NASTAR Center with host UTMB.
- Baylor College of Medicine with host UTMB.
- · University of Nebraska Lincoln with host NMSU.
- SatWest with host NMSU.
- ERAU with host NMSU.

1.8 TASK CLOSE-OUTS

· Carol Gregorek is working to compile all the necessary documentation and information for orderly close out of tasks that have been completed in the past, including:

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- 182-UTMB (Dec 31, 2011)
- 183-UTMB (Dec 31, 2012)
 281-CU (August 31, 2012):
 288-UF (Dec 31, 2012):
- 282-FIT (Dec 31, 2011):
- 283-FSU (March 31, 2012):
- 284-NMSU (May 31, 2012):
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 - 289-UTMB (August 17, 2012)

1.9 General Comments

2. SELF-GOVERNANCE SUBCOMMITTEE REPORT (LEAD, NAT VILLAIRE)

- Members
 - FIT Nat Villaire
- UF Norm Fitz-Coy
- Subcommittee Update:

3. COLLABORATION SUBCOMMITTEE REPORT (LEAD, TRISTAN FIEDLER)

- Members
 - UF Mark Sheplak
 - NMSU Pat Hynes
 - CU Dan Scheeres
- CESTAC Update:
- Subcommittee Update:
- FIT Tristan Fiedler
- NMT Warren Ostergren
- CU Penny Axelrad
- UTMB Jim Vanderploeg

4. STRATEGIC PLANNING SUBCOMMITTEE REPORT (LEAD, DAVE KLAUS)

- Members
 - CU Dave Klaus
- SU Sigrid Close
- NMT Andrei Zagrei FSU Billie Oates

- FIT Dan Kirk
- SU Juan Alonso
- SU Scott Hubbard

• Subcommittee Update: Dave has been working on a draft for the strategic plan which he hopes will be sent out to the committee soon. We should have something more to report at the next telecon. A reasonably vetted baseline should be in place by the summer admin meeting for discussion

5. ANY OTHER BUSINESS

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Attachment 1: ATM3 Details

Basics

- Who: All COE CST PIs, Students, CESTAC, AST Tech Monitors, other interested parties
- Where: Hyatt Capitol Hill, Washington DC.
- When: Arrive Oct 28, evening reception. Full meeting days Oct 29 & 30. Depart Oct 31.
- Web: http://www.coe-cst.org/atm3 reg.html

Cost Details

- All costs covered by COE CST, either through prior grant awards or FIT invoice repayment.
- To maintain control over the budget, please make plans for you and your students early and let Carol know!

Lodging Details

- Hyatt Regency Washington on Capitol Hill
- 400 New Jersey Avenue, N.W., Washington, DC 20001
- Phone: 202/737-1234
- Group Number: CSTATM3
- Room Rate: \$269.00 + tax per room single (~\$320 ttc)
- We need 180 room-nights, so please book early and let Carol know about your plans!

Transportation Details

- Please make plane reservations as soon as possible.
- Shown are results of skyscanner.com search on July 24. Your mileage may vary...
- We have a budget to maintain so please book early and let Carol know about your plans!

Meals Details

- Meals covered in cost of conference
 - Oct 28 evening reception.
 - Oct 29-30 breakfasts.
 - Oct 29-30 lunches.

Denver Int'l (DEN)	Albuquerque (ABQ)	Orlando Int'l (MCO)
**** Stops ****	***** Stops *****	***** Stops *****
Direct \$416	Direct \$460	Direct \$200
1 stop \$346	1 stop \$337	1 stop \$222
	2+ stops \$607	
**** Airlines ****	**** Airlines ****	***** Airlines *****
\$346 airTran	\$607 airTran	\$242 airTran
\$688 Alaska Airlines	\$711 Alaska Airlines	\$222 Delta
\$416 Frontier Airlines	\$482 American Airlines	\$694 Frontier Airlines
\$351 jetBlue	\$337 Frontier Airlines	\$211 jetBlue
\$412 United	\$370 jetBlue	\$200 United
\$375 Airline combinations	\$460 United	\$238 US Airways
	\$340 Airline combinations	

San Francisco Int'l (SFO)	El Paso Int'l (ELP)	Houston (HOU)
***** Stops *****	***** Stops *****	***** Stops *****
Direct \$418	Direct none	Direct \$313
1 stop \$306	1 stop \$297	1 stop \$310
2+ stops \$580	2+ stops \$692	2+ stops \$417
**** Airlines ****	**** Airlines ****	**** Airlines ****
\$306 airTran	\$692 airTran	\$335 airTran
\$497 Alaska Airlines	\$725 Alaska Airlines	\$445 American Airlines
\$424 American Airlines	\$300 American Airlines	\$330 Delta
\$318 Frontier Airlines	\$309 Delta	\$459 Frontier Airlines
\$486 Sky Aviation	\$297 United	\$310jetBlue
\$486 Sun Country Airlines		\$313 United
\$418 United		\$476 Airline combinations
\$418 Virgin America		
\$358 Airline combinations		

- Meals NOT covered in cost of conference
 - Oct 28 (travel day) meals.
 - Oct 29-30 dinners.
 - Oct 31 (travel day) meals.

Attachment 2: ATM3 Draft Schedule

	Day 1: Tuesday, October 29, 2013		Day 2: Wednesday, October 30, 2013	
8:00 AM		8:00 AM		8:00 AM
8:15 AM	Registration	8:15 AM	Registration	8:15 AM
8:30 AM	Location TBD	8:30 AM	Location TBD	8:30 AM
8:45 AM		8:45 AM		8:45 AM
9:00 AM	OPENING REMARKS	9:00 AM	DAY 2 OPENING REMARKS	9:00 AM
9:15 AM	WELCOME (TBD)	9:15 AM		9:15 AM
9:30 AM	FAA OPENING KEYNOTE SPEECH (G. Nield) LEGISLATIVE OPENING KEYNOTE SPEECH (TBD)	9:30 AM	3: HUMAN SPACEFLIGHT RESEARCH (5 talks in 1 hr 15 min) 184. Comm'l Spacecraft Human Rating (CU-Klaus)	9:30 AM
9:45 AM	PROGRAMMATIC OVERVIEWS (3 talks in 45 min)	9:45 AM	255. Wearable Biomedical Equip (UTMB-Castleberry) 256. Centrifuge Testing (UTMB-Vanderploeg)	9:45 AM
10:00 AM	- FAA COE Welcome & Overview (Watts)	10:00 AM	294. Minor Injury Severity Scale (UTMB-Castleberry)	10:00 AM
10:15 AM	- FAA AST Welcome & Status Report (Kelly) - COE CST Status Report (Davidian)	10:15 AM	295. EMF Effects on Implantable Devices (UTMB-Vanderploeg)	10:15 AM
10:30 AM		10:30 AM		10:30 AM
10:45 AM	Networking Break	10:45 AM	Networking Break	10:45 AM
11:00 AM		11:00 AM		11:00 AM
11:15 AM	COE CST AFFILIATE MEMBER OVERVIEW (6 talks in 60 min) - Affiliate Member Overview (Fiedler)	11:15 AM	4: SPACE TRANSPORTATION INDUSTRY VIABILITY (4 talks in 60 min) 297. Task 301. Spaceport Regulations (MU-Howard)	11:15 AM
11:30 AM	- NASTAR (Henwood), Baylor College of Medicine (Clark), ERAU (TBD),	11:30 AM	298. Task 302. Int'l Comm'l Space Regulations (MU-Fitzpatrick)	11:30 AM
11:45 AM	SatWest (Barnett), UN Lincoln (Schaeffer)	11:45 AM	193. Role of COE CST in EFP (SU-Hubbard), (CU-Born)	11:45 AM
12:00 PM		12:00 PM		12:00 PM
12:15 PM		12:15 PM		12:15 PM
12:30 PM	Lunch	12:30 PM	Lunch	12:30 PM
12:45 PM	Location TBD	12:45 PM	Location TBD	12:45 PM
1:00 PM		1:00 PM		1:00 PM
1:15 PM		1:15 PM		1:15 PM
1:30 PM	1a: SPACE TRAFFIC MANAGEMENT AND OPERATIONS (3 talks in 45 min)	1:30 PM		1:30 PM
1:45 PM	185. Unified 4D Trajectory (SU-Alonso) 258. Multi-disc Analysis of Safety Metrics (SU-Alonso)	1:45 PM		1:45 PM
2:00 PM	247. Air & Space Traffic Considerations for CST (FIT-Villaire)	2:00 PM	Placeholder for Allied Organization Presentations	2:00 PM
2:15 PM	1b: SPACE TRAFFIC MANAGEMENT AND OPERATIONS (2 talks in 30 min)	2:15 PM		2:15 PM
2:30 PM	186. Space Env MMOD Modeling & Prediction (SU-Close), (CU-Fuller-Rowell)	2:30 PM		2:30 PM
2:45 PM		2:45 PM		2:45 PM
3:00 PM	Networking Break	3:00 PM	Networking Break	3:00 PM
3:15 PM	2a: SPACE TRANSPORTATION OPS, TECH & PAYLOADS (3 talks in 45 min)	3:15 PM		3:15 PM
3:30 PM	228. Magneto-Elastic Sensing for SHM (NMT-Zagrai, Ostergren) 253. Ultra High Temp Composites (UCF-Gou, Kapat)	3:30 PM		3:30 PM
3:45 PM	293. Reduced Order Non-Linear Dynamic System Models (NMT-Miller)	3:45 PM		3:45 PM
4:00 PM		4:00 PM		4:00 PM
4:15 PM	2b: SPACE TRANSPORTATION OPS, TECH & PAYLOADS (4 talks in 60 min)	4:15 PM	CLOSING REMARKS	4:15 PM
4:30 PM	244. Autonomous RDV & Docking for Space Debris Mitigation (UF-Fitz-Coy), (FSU-Collins). (SU-Rock), (CU-Axelrad)	4:30 PM	FAA KEYNOTE SPEECH (TBD) LEGISLATIVE KEYNOTE SPEECH (TBD)	4:30 PM
4:45 PM		4:45 PM	FINAL COMMENTS (TBD)	4:45 PM
5:00 PM	2c: SPACE TRANSPORTATION OPS, TECH & PAYLOADS (2 talks in 30 min)	5:00 PM	Adjournment	5:00 PM
5:15 PM	241. High Temp Pressure Transducers (UF-Sheplak), (FSU-Oates)	5:15 PM		5:15 PM
5:30 PM	Adjournment Announcements	5:30 PM		5:30 PM

Overview of the CESTAC Assessment of the 2012 FAA COE CST Research Portfolio

J. H. Rothenberg

13

August 2013

Assessment Criteria

- Relevance of current Research Areas and Tasks to the FAA goals and/or Industry needs
- Timeliness of potential research results versus FAA and Industry needs
- Funding consistency between levels and relative importance

Findings

- Over the next 5 years we can expect to see the emergence of an active Commercial Human Spaceflight suborbital and orbital market
- Assessed the strategic relevance and timeliness of the Research Tasks to meet this emerging market and concluded:
 - Almost all of the current Research Tasks have the potential to help the Space Industry and/or meet the FAA needs
 - There is a notable variance in the level of potential near-term impact of the Tasks to meet both the Industry and FAA needs
 - Given the funding constraints Industry and FAA needs may be better served by deferring some of the current Research activities, where the potential payoff is in the far-term, in order to accelerate those areas that have higher potential for near-term payoff

Relevance and Timeliness

- 1. Highly relevant and timely research with clear near-term needs
 - Medical research (medical conditions, database of physiological effects, EMI effects on devices)
 - Spaceport operations but contingency operations need to be addressed
 - Policy and Legal
 - Space traffic control and 4D modeling Orbital debris characterization
- 2. Important and timely research with a potential for high ROI for FAA and/or Industry:
 - Flight System Technology Research included an objective to simplify design certification or to eliminate the need for Certification
 - Market Research emphasized Policy & Regulatory research that are not typically funded or easily performed by Industry but will be of direct benefit to industry
- 3. Research areas which given limited funding may not be the best investment of COE research dollars at the current time:
 - Studies on student leadership and training. (The CESTAC, however strongly believes that student involvement in all of the other Research Ares is absolutely critical!)
 - CESTAC believes debris mitigation is an International problem and does not appear to be an FAA technology development responsibility

Recommendations

4.1 Space Traffic Management and Operations

- Traffic Management, Characterizing Orbital Debris, Atmospheric Modeling, and work on the Integrated Framework for Spaceports are all relevant and important activities
- The identification of the processes, responsibilities and training to deal with off-nominal operations is a very important area that needs to be funded
- The Situational Awareness Task output was defined in terms of research products and thus of lessor importance then activities with specific nearterm applications potential
- The CESTAC recommends that the Space Traffic Management and Operations Research Theme Task priorities and products versus funding allocations be reassessed and, if warranted be realigned better meet emerging needs

Recommendations

4.2 Space Transportation Operations, Technologies and Payloads

- CESTAC concluded that the Research Tasks in this Theme with one exception were important and relevant to both Industry and the FAA.
 - CESTAC questions the role of the FAA in mitigation of space debris

4.3 Human Spaceflight

- The CESTAC found the Human Spaceflight Research Tasks are both important and relevant
- Research Task for Human Rating of Commercial Operated Spacecraft is lagging behind a real need and CESTAC recommends the FAA reexamine the schedule and expected output of this Task for consistency with FAA and Industry needs

Recommendations

4.4 Space Transportation Industry Viability

Industry viability is an important topic and the Role that Policy, Law and Regulation play in either constraining or enabling the commercial space transportation is important to understand and highly relative to Industry and FAA needs

Policy and Regulations

- International Policy Research activities that were presented appeared to be very relevant and the CESTAC recommends that these areas be pursued vigorously.
- Given the potential for a fairly rapid increase in all commercial space activities in the next 5
 years, the CESTAC would advise the FAA to invest ASAP in any additional research required
 to identify areas they may need to regulate

Market

- The conclusions from work to date to identify programmatic issues as the biggest challenge to the hosted and shared payload market development is on target
- However, the resolution of programmatic challenges is in practice a business "risks versus rewards" based decision and thus the next phase of the Research " to understand what it takes to mitigate programmatic barriers" may be more appropriate to be funded by Industry
- Pursing the understanding of current policies/regulations that constrain the commercial market and identifying changes and/or new policies/regulations that would enhance, the Commercial market would be a great value to Industry

Recommendations

Funding Priorities

- The CESTAC assessment also intended to look at the Research Areas funding levels and balance versus potential value to the FAA and Industry needs, but the data provided by the Teams was of insufficient consistency to develop an opinion
- CESTAC will work with the COE CST Leadership to try to improve the cost and schedule information provided at the 2013 Review.

FAA AST COE CST EXECUTIVE COMMITTEE TELECON #16 - MONDAY, 16 SEPTEMBER 2013

SCHOOL	PRIMARY	SECONDARY	ADDITIONAL
CU	☐ Dr. David Klaus	☐ Dr. Penina Axelrad	□ Dr. George Born□ Dr. Tim Fuller-Rowell□ Dr. Dan Scheeres□ Mr. Brad Cheetham
FIT	☐ Dr. Dan Kirk	☐ Dr. Sam Durrance	Dr. Nat VillaireDr. Tristan Fiedler
FSU	☐ Dr. Farrukh Alvi	☐ Dr. Emmanuel Collins	□ Dr. Billy Oates□ Dr. Rajan Kumar
NMSU	Dr. Patricia Hynes		Ms. Joylynn Watkins
NMT	☐ Dr. Warren Ostergren	☐ Dr. Dave Westpfahl	□ Dr. Keith Miller□ Dr. Andrei Zagrai
SU	☐ Prof. Scott Hubbard	☐ Dr. Juan Alonso	□ Dr. Sigrid Close□ Dr. Steve Rock
UCF	☐ Dr. Jay Kapat	☐ Dr. Jan Gou	☐ Dr. Ali Gordon☐ Dr. Lin An
UF	□ Dr. Norm Fitz-Coy	□ Dr. Mark Sheplak	
UTMB	Dr. Jim Vanderploeg	Dr. Tarah Castleberry	□ Dr. Charles Mathers
CESTAC	Dr. Joseph Rothenberg	Ms. Carissa Christensen	
OAT	■ Ms. Carol Gregorek	☐ Mr. Fred Bowen	
FAA AST	Mr. Ken Davidian		
FAA	□ Dr. Patricia Watts	□ Dennis Flath	☐ John Reinhart (UAS COE)
NASA	☐ Mr. Alex MacDonald	☐ Dr. Dan Rasky	□ Mark Redlinger

0.1 Executive Committee Meeting Information

- Dial-In #: 712-432-0075, Participant Access Code: 141648#
- The next telecom is scheduled for October 7, 2013, 1-2pm EDT.

0.2 Attachments

1. ATM3 Details

2. ATM3 Draft Schedule

3. Paper Banner Information4. FIT ATM3 Travel Guidelines

1. STARTERS (ADMINISTRIVIA)

1.1 FY13Q3 Quarterly Reporting Alert

- Status of quarterly reports, for the period April 1 June 30, 2013, due on July 31, 2013.
 - Complete: 1
- Expense report; No Progress report: 5
- Submitted: 27
- Progress report; No Expense report: 12
- Delinquent: 3
- ☐ TMs: Please evaluate your tasks ("turning them from white to green, yellow, or red").

1.2 Third Annual Administrative Meeting Report

• The draft version dated June 27, 2013 is now labeled as the final version of the report.

1.3 Third Annual Technical Meeting (ATM3)

- Details given in attachment 1.
- Draft schedule given in attachment 2.
- Paper banner information is given in attachment 3.
- FIT ATM3 Travel Guidelines are given in attachment 4.

1.5 Website Status (Fred Bowen)

1.6 Budget and Finance Stuff

No new information.

1.7 Special Announcements

Pat's ISPCS Announcement

1.8 TASK CLOSE-OUTS

 Carol Gregorek is working to compile all the necessary documentation and information for orderly close out of tasks that have been completed in the past, including:

ENDING SOON

PAST CLOSED OUT TASKS:

- 255-UTMB (June 30, 2013)
- 256-UTMB (June 30, 2013)
- 297-FSU (May 31, 2013):
- 181-UTMB (Dec 31, 2012)
- 182-UTMB (Dec 31, 2011)
- 183-UTMB (Dec 31, 2012) • 281-CU (August 31, 2012):
- 282-FIT (Dec 31, 2011):
- 283-FSU (March 31, 2012):
- 284-NMSU (May 31, 2012):
- 286-SU (Dec 31, 2011):
- 287-UCF (Sept 30, 2012)
- 288-UF (Dec 31, 2012):
- 289-UTMB (August 17, 2012)

1.9 General Comments

2. SELF-GOVERNANCE SUBCOMMITTEE REPORT (LEAD, NAT VILLAIRE)

- Members
 - FIT Nat Villaire
- UF Norm Fitz-Coy
- Subcommittee Update:

3. COLLABORATION SUBCOMMITTEE REPORT (LEAD, TRISTAN FIEDLER)

FIT - Tristan Fiedler

- Members
 - UF Mark Sheplak
 - NMSU Pat Hynes
 - CU Dan Scheeres
- CESTAC Update:
- Affiliate Members Update:

NMT – Warren Ostergren

- CU Penny Axelrad
- UTMB Jim Vanderploeg

CANDIDATES AWAITING SECOND REVIEW

OTHER ACTIVITIES

- NASTAR Center with host UTMB.
- Baylor College of Medicine with host UTMB.
- University of Nebraska-Lincoln with host NMSU.
- Satwest with host NMSU.
- ERAU with host NMSU.

4. STRATEGIC PLANNING SUBCOMMITTEE REPORT (LEAD, DAVE KLAUS)

- Members
 - CU Dave Klaus
- SU Sigrid Close
- NMT Andrei Zagrei FSU Billie Oates

- FIT Dan Kirk
- SU Juan Alonso
- SU Scott Hubbard

- Subcommittee Update: Dave has been working on a draft for the strategic plan which he
 hopes will be sent out to the committee soon. We should have something more to report at
 the next telecon. A reasonably vetted baseline should be in place by the summer admin
 meeting for discussion
- "I didn't hear back from anyone on that, but can you
- Please circulate the attached document to the COE membership with the request that they
 make any comments or suggestions to it with Track Changes and return to me by the end of
 August?
- Even if they just provide some thoughts as to what is considered important, irrelevant, missing, etc., that would be a good start
- This is the same version that I had sent you earlier, which was the source of the Power Point presentation I gave at the AAM. The first 4 pages and the last page are just cut directly from the original COE CST solicitation. What I'd like is to get some dialog going from comments made to pages 5-8. Once I get some feedback from others, I will update this for final review and approval so we can start working toward clear, common goals as a COE.

5. ANY OTHER BUSINESS

•

Attachment 1. ATM3 Details

Basics

- Who: All COE CST PIs, Students, CESTAC, AST Tech Monitors, other interested parties
- Where: Hyatt Capitol Hill, Washington DC.
- When: Arrive Oct 28, evening reception. Full meeting days Oct 29 & 30. Depart Oct 31.
- Web: http://www.coe-cst.org/atm3 reg.html

Cost Details

- All costs covered by COE CST, either through prior grant awards or FIT invoice repayment.
- To maintain control over the budget, please make plans for you and your students early and let Carol know!

Lodging Details

- Hyatt Regency Washington on Capitol Hill
- 400 New Jersey Avenue, N.W., Washington, DC 20001
- Phone: 202/737-1234
- Group Number: CSTATM3
- Room Rate: \$269.00 + tax per room single (~\$320 ttc)
- We need 180 room-nights, so please book early and let Carol know about your plans!

Transportation Details

- Please make plane reservations as soon as possible.
- Shown are results of skyscanner.com search on July 24. Your mileage may varv...
- We have a budget to maintain so please book early and let Carol know about your plans!

Meals Details

- Meals covered in cost of conference
 - Oct 28 evening reception.
 - Oct 29-30 breakfasts.
 - Oct 29-30 lunches.

Denver Int'l (DEN)	Albuquerque (ABQ)	Orlando Int'l (MCO)
***** Stops *****	***** Stops *****	***** Stops *****
Direct \$416	Direct \$460	Direct \$200
1 stop \$346	1 stop \$337	1 stop \$222
	2+ stops \$607	
**** Airlines ****	**** Airlines ****	***** Airlines *****
\$346 airTran	\$607 airTran	\$242 airTran
\$688 Alaska Airlines	\$711 Alaska Airlines	\$222 Delta
\$416 Frontier Airlines	\$482 American Airlines	\$694 Frontier Airlines
\$351 jetBlue	\$337 Frontier Airlines	\$211 jetBlue
\$412 United	\$370 jetBlue	\$200 United
\$375 Airline combinations	\$460 United	\$238 US Airways
	\$340 Airline combinations	

San Francisco Int'l (SFO)	El Paso Int'l (ELP)	Houston (HOU)
**** Stops ****	***** Stops *****	***** Stops *****
Direct \$418	Direct none	Direct \$313
1 stop \$306	1 stop \$297	1 stop \$310
2+ stops \$580	2+ stops \$692	2+ stops \$417
**** Airlines *****	***** Airlines *****	**** Airlines ****
\$306 airTran	\$692 airTran	\$335 airTran
\$497 Alaska Airlines	\$725 Alaska Airlines	\$445 American Airlines
\$424 American Airlines	\$300 American Airlines	\$330 Delta
\$318 Frontier Airlines	\$309 Delta	\$459 Frontier Airlines
\$486 Sky Aviation	\$297 United	\$310jetBlue
\$486 Sun Country Airlines		\$313 United
\$418 United		\$476 Airline combinations
\$418 Virgin America		
\$358 Airline combinations		

- Meals NOT covered in cost of conference
 - Oct 28 (travel day) meals.
 - Oct 29-30 dinners.
 - Oct 31 (travel day) meals.

Presentation Details

- Presenters: We'll use a template similar to before, covering the Who, What, Where, When, Why and How of your project.
- Presenters: We'll also need a summary quad chart as part of your presentation.
- Students: We will conduct a poster competition. The prize is TBD. Samples of "good" poster entries will be provided (on the web site? On the facebook page? TBD)

Attachment 2. ATM3 Draft Schedule

NOT SHOWN... Day 0, Monday, October 28, 2013 from 5-7pm: Corporate Sponsored Evening Poster Session and Discussion at the Hyatt Regency.

	Day 1: Tuesday, October 29, 2013		Day 2: Wednesday, October 30, 2013
8:00 AM		8:00 AM	
8:15 AM	Registration	8:15 AM	Registration
8:30 AM	Hyatt Regency Capitol Room A	8:30 AM	Hyatt Regency Capitol Room A
8:45 AM		8:45 AM	
9:00 AM	OPENING REMARKS	9:00 AM	DAY 2 OPENING REMARKS
9:15 AM	WELCOME (TBD) FAA OPENING KEYNOTE SPEECH (G. Nield)	9:15 AM	
9:30 AM	LEGISLATIVE OPENING KEYNOTE SPEECH (G. NIEIU)	9:30 AM	3: HUMAN SPACEFLIGHT RESEARCH (5 talks in 1 hr 15 min) 184. Comm'l Spacecraft Human Rating (CU-Klaus)
9:45 AM		9:45 AM	255. Wearable Biomedical Equip (UTMB-Castleberry) 256. Centrifuge Testing (UTMB-Vanderploeg)
10:00 AM	PROGRAMMATIC OVERVIEWS (3 talks in 45 min) - FAA COE Welcome & Overview (Watts)	10:00 AM	294. Minor Injury Severity Scale (UTMB-Castleberry)
10:15 AM	- COE CST Status Report (Davidian)	10:15 AM	295. EMF Effects on Implantable Devices (UTMB-Vanderploeg)
10:30 AM		10:30 AM	
10:45 AM	Networking Break	10:45 AM	Networking Break
11:00 AM		11:00 AM	
11:15 AM	COE CST AFFILIATE MEMBER OVERVIEW (3 talks in 45 min)	11:15 AM	2c: SPACE TRANSPORTATION OPS, TECH & PAYLOADS (4 talks in 60 min)
11:30 AM	 - NASTAR (Henwood), Baylor College of Medicine (Clark), ERAU (TBD), SatWest (Barnett), UN Lincoln (Schaeffer), NASA ARC (TBD), DLR (Drescher) 	11:30 AM	244. Autonomous RDV & Docking for Space Debris Mitigation (UF-Fitz-Coy), (FSU-Collins). (SU-Rock), (CU-Axelrad)
11:45 AM		11:45 AM	
12:00 PM		12:00 PM	
12:15 PM	Lunch	12:15 PM	Lunch
12:30 PM			Hyatt Regency Capitol Room B
12:45 PM			
1:00 PM	1a: SPACE TRAFFIC MANAGEMENT AND OPERATIONS (2 talks in 30 min)	1:00 PM	
1:15 PM	186. Space Env MMOD Modeling & Prediction (SU-Close), (CU-Fuller-Rowell)	1:15 PM	4: SPACE TRANSPORTATION INDUSTRY VIABILITY (4 talks in 60 min) 297. Task 301. Spaceport Regulations (MU-Howard)
1:30 PM	1b: SPACE TRAFFIC MANAGEMENT AND OPERATIONS (3 talks in 45 min)	1:30 PM	298. Task 302. Int'l Comm'l Space Regulations (MU-Fitzpatrick) 193. Role of COE CST in EFP (SU-Hubbard), (CU-Born)
1:45 PM	185. Unified 4D Trajectory (SU-Alonso) 258. Multi-disc Analysis of Safety Metrics (SU-Alonso)	1:45 PM	
2:00 PM	247. Air & Space Traffic Considerations for CST (FIT-Villaire)	2:00 PM	
2:15 PM	1c: SPACE TRAFFIC MANAGEMENT AND OPERATIONS (3 talks in 45 min)	2:15 PM	Placeholder for Allied Organization Presentations
2:30 PM	257: Master's Launch & On-Orbit Ops Class (Cheetham) 187. Space Situational Awareness (CU-Scheeres)	2:30 PM	CESTAC Closed Meeting in Parallel
2:45 PM	220: Space Operational Framework (NMSU-Hynes)	2:45 PM	
3:00 PM	Networking Break	3:00 PM	Networking Break
3:15 PM	Networking break	3:15 PM	Hetworking Dreak
3:30 PM	2a: SPACE TRANSPORTATION OPS, TECH & PAYLOADS (3 talks in 45 min)	3:30 PM	CLOSING REMARKS
3:45 PM	228. Magneto-Elastic Sensing for SHM (NMT-Zagrai, Ostergren) 253. Ultra High Temp Composites (UCF-Gou, Kapat)	3:45 PM	FAA KEYNOTE SPEECH (TBD) LEGISLATIVE KEYNOTE SPEECH (TBD)
4:00 PM	293. Reduced Order Non-Linear Dynamic System Models (NMT-Miller)	4:00 PM	FINAL COMMENTS (TBD)
4:15 PM	2b: SPACE TRANSPORTATION OPS. TECH & PAYLOADS (4 talks in 60 min)	4:15 PM	Adjournment
4:30 PM	241. High Temp Pressure Transducers (UF-Sheplak), (FSU-Oates)	4:30 PM	
4:45 PM	298: Integration & Evaluation of Payloads (NMSU-Hynes) 299: Nitrous Oxide Composite Tank Testing (NMT-Ostergren)	4:45 PM	
5:00 PM		5:00 PM	
5:15 PM	Adjournment	5:15 PM	

Attachment 3. Paper Banner Information

Here's some (hopefully useful) information regarding the paper banners that should be produced for the ATM3.

Why: The COE CST wants to visually demonstrate all the great work being done by students at the COE CST universities (both Member and Affiliate) so we decided to require (strongly request) that a banner be produced for each COE CST task for presentation at the ATM.

There will be a competition for the "Best Paper Poster" so we want you to put some effort into making it full of content (a.k.a. "steak") *and* making it look good (a.k.a "sizzle"). A prize will be awarded for "Best Banner". Judges, judging rules and prize(s) are all TBD.

Who: We need one paper banner per COE CST task. If multiple students are working on a single task, we expect a single paper banner. If a single student is working on multiple tasks, we expect multiple paper banners.

What: The paper banner will be produced by esigns.com. The students are required to provide a graphic file that can be printed on a specific banner product. The banner size we are using for the ATM3 is 23.5" x 63". At a recommended 150 dots-per-inch (dpi), that means the graphic to be produced should be 3525 pixels wide x 9450 pixels high. The banner will be presented in the "portrait" orientation.

- You can view the setup from the Esigns website here: http://www.esigns.com/creation/banner-stands_awesome-x-63x23-1-side/upload-file/
- The Esigns file setup and printing specs are here: http://www.esigns.com/file-setup-instructions.html

Paper posters from last year have been posted on the "Center of Excellence for Commercial Space Transportation" facebook page with "likes" and "dislikes" for the design (not content) of each. Please review the comments on the facebook page to see how to make your poster as good as possible and for tips on how to best present a winning poster for the competition!

 The URL for the facebook page is: https://www.facebook.com/media/set/?set=a.576289252413374.1073741827.139252652783 705&type=1

How: Your poster banner will be reviewed prior to printing. We ask that everybody save your poster at our shared dropbox folder named "ATM3 Posters". You will receive a separate email from dropbox inviting you to access this folder. Once the banner graphic has been reviewed, we'll upload it for printing and delivery.

When: The deadline for transferring your student poster to dropbox is October 14th.

For More Information: If you have any questions, please contact Fred Bowen (fredbowen@orionat.com), Tristan Fiedler (fiedler@fit.com) or Ken Davidian (ken.davidian@faa.gov).

BTW...

This size graphic caused problems with my machine's memory, so maybe it would be better to break it up into pieces and we can put it together in Esigns.

You might want to create a full-sized pdf and print it out as tiled 8.5x11 pages to see a mock-up before finalizing your design.

Attachment 4. FIT ATM3 Travel Guidelines

Below are the slightly revised set of guidelines that have been reviewed by Florida Tech's Sponsored Programs Office.

- 1. Each Traveler completes a FLORIDA TECH TRIP ITINERARY form by Sep 19, 2013 for review and approval by Tristan Fiedler and the Florida Tech Office of Sponsored Programs. Forms submitted after the deadline may not be eligible for reimbursement due to budget planning.
- 2. All Travelers are responsible for registering for ATM3 at www.coe-cst.org and booking all travel, including hotel, airfare, ground transport, etc.
- 3. Hyatt DC Capitol Hill hotel room charges for approved travelers under the conference rate will be paid for on-site in DC by COE CST Administration at the conclusion of the meeting.
- 4. In general unless stipulated otherwise, all travel expenses must be in accordance with FLORIDA TECH TRAVEL POLICY, e.g. Per Diem Rates, Mileage Rates, etc. Please note that the option for meals reimbursement is either ALL per diem or ALL ITEMIZED receipts showing items purchased. Per diem rates will be adjusted based on Meals provided by ATM3.
- 5. After ATM3, each Traveler must complete the FLORIDA TECH Travel Expense Form by Nov 15, 2013 including receipts for all expenses.
- 6. Items NOT Reimbursed [due to budget limitations for ATM3 a/o policy]:
- Car Rental & Parking Fees in Washington DC
- Alcohol
- Meals provided by the Tech Mtg
- Hotel extra room charges (e.g. extra nights, pay per view movies, mini-bar, room service, etc)
- Incidental personal items (e.g. haircut, clothing, toiletries)
- Expenses incurred due to casualty or theft
- 7. All documents must be emailed to Tristan Fiedler with subject line "ATM3::FIT::TRAVEL". Also, please copy Carol Gregorek at carolgregorek@orionat.com.

FLORIDA TECH TRIP ITINERARY

http://www.fit.edu/pmm/documents/doc mgr/142/TripItinerary 2013.pdf

TRAVEL EXPENSE FORM

http://www.fit.edu/pmm/documents/doc_mgr/142/TravExpRprt2013a.xls

TRAVEL POLICY (PARTIAL)

http://www.fit.edu/pmm/documents/doc_mgr/359/Travel%20and%20Business%20Expense%20 Policy.pdf

FAA AST COE CST EXECUTIVE COMMITTEE TELECON #17 - MONDAY, 7 OCTOBER 2013

SCHOOL	PRIMARY	SECONDARY	ADDITIONAL
CU	☐ Dr. David Klaus	☐ Dr. Penina Axelrad	 □ Dr. George Born □ Dr. Tim Fuller-Rowell □ Dr. Dan Scheeres □ Mr. Brad Cheetham
FIT	☐ Dr. Dan Kirk	☐ Dr. Sam Durrance	Dr. Nat VillaireDr. Tristan Fiedler
FSU	☐ Dr. Farrukh Alvi	☐ Dr. Emmanuel Collins	□ Dr. Billy Oates□ Dr. Rajan Kumar
NMSU	□ Dr. Patricia Hynes		Ms. Joylynn Watkins
NMT	☐ Dr. Warren Ostergren	☐ Dr. Dave Westpfahl	□ Dr. Keith Miller□ Dr. Andrei Zagrai
SU	☐ Prof. Scott Hubbard	☐ Dr. Juan Alonso	□ Dr. Sigrid Close□ Dr. Steve Rock
UCF	☐ Dr. Jay Kapat	☐ Dr. Jan Gou	☐ Dr. Ali Gordon☐ Dr. Lin An
UF	☐ Dr. Norm Fitz-Coy	□ Dr. Mark Sheplak	
UTMB	Dr. Jim Vanderploeg	Dr. Tarah Castleberry	□ Dr. Charles Mathers
CESTAC	Dr. Joseph Rothenberg	Ms. Carissa Christensen	
OAT	Ms. Carol Gregorek	☐ Mr. Fred Bowen	
FAA AST	☐ Mr. Ken Davidian		
FAA	□ Dr. Patricia Watts	□ Dennis Flath	☐ John Reinhart (UAS COE)
NASA	☐ Mr. Alex MacDonald	☐ Dr. Dan Rasky	■ Mark Redlinger

0.1 Executive Committee Meeting Information

- Dial-In #: 712-432-0075, Participant Access Code: 141648#
- The next telecom is scheduled for October 7, 2013, 1-2pm EDT.

0.2 Attachments

1. ATM3 Details 2. ATM3 Draft Schedule

3. Paper Banner Information4. FIT ATM3 Travel Guidelines

1. STARTERS (ADMINISTRIVIA)

1.1 FY13Q3 Quarterly Reporting Alert

- Status of quarterly reports, for the period July 1 Sept 30, 2013, due on Oct 31, 2013.
 - Complete:
- Expense report; No Progress report:
- Submitted:
- Progress report; No Expense report:
- Delinquent:

1.2 Third Annual Technical Meeting (ATM3)

- Background Information: Given in Attachments
- Status
 - # Registered:
 - # Hotel Reservations:
 - # Banners: 0/20

1.5 Website Status (Fred Bowen)

No updates.

1.6 Budget and Finance Stuff

- FY13 allocations sent to all Pls.
- FY14 funding cycle begins.

1.7 Special Announcements

Pat's ISPCS Announcement

1.8 TASK CLOSE-OUTS

• Carol Gregorek is working to compile all the necessary documentation and information for orderly close out of tasks that have been completed in the past, including:

ENDING SOON

- 255-UTMB (June 30, 2013)
- 256-UTMB (June 30, 2013)
 182-UTMB (Dec 31, 2011)
- 297-FSU (May 31, 2013)

PAST CLOSED OUT TASKS:

- 181-UTMB (Dec 31, 2012)
- 183-UTMB (Dec 31, 2012)
 281-CU (August 31, 2012)
 288-UF (Dec 31, 2012)
- 282-FIT (Dec 31, 2011)
- 283-FSU (March 31, 2012)
- 284-NMSU (May 31, 2012)
- 286-SU (Dec 31, 2011)
- 287-UCF (Sept 30, 2012)
- 289-UTMB (August 17, 2012)

1.9 General Comments

2. SELF-GOVERNANCE SUBCOMMITTEE REPORT (LEAD, NAT VILLAIRE)

- Members: Nat Villaire/FIT (Chair), Norm Fitz-Coy/UF
- Subcommittee Update:

3. COLLABORATION SUBCOMMITTEE REPORT (LEAD, TRISTAN FIEDLER)

- Members: Tristan Fiedler/FIT (Chair), Mark Sheplak/UF, Penny Axelrad/CU, Pat Hynes/NMSU, Warren Ostergren/NMT, Jim Vanderploeg/UTMB, Dan Scheeres/CU
- CESTAC Update:
- Affiliate Members Update:
 - NASTAR Center with host UTMB: SOW accepted. Awaiting MOA execution.
 - University of Nebraska-Lincoln with host NMSU: SOW accepted. Awaiting MOA execution.
 - Satwest with host NMSU: SOW accepted. Awaiting MOA execution.
 - Baylor College of Medicine with host UTMB: Awaiting SOW acceptance.
 - ERAU with host NMSU: Awaiting SOW acceptance.
- Subcommittee Update:

4. STRATEGIC PLANNING SUBCOMMITTEE REPORT (LEAD, DAVE KLAUS)

- Members: Dave Klaus/CU (Chair), Sigrid Close/SU, Andei Zagrei/NMT, Billie Oates/FSU, Dan Kirk/FIT, Juan Alonso/SU, Scott Hubbard/SU
- Subcommittee Update:

5. ANY OTHER BUSINESS

Attachment 1. ATM3 Details

Basics

- Who: All COE CST PIs, Students, CESTAC, AST Tech Monitors, other interested parties
- Where: Hyatt Capitol Hill, Washington DC.
- When: Arrive Oct 28, evening reception. Full meeting days Oct 29 & 30. Depart Oct 31.
- Web: http://www.coe-cst.org/atm3 reg.html

Cost Details

- All costs covered by COE CST, either through prior grant awards or FIT invoice repayment.
- To maintain control over the budget, please make plans for you and your students early and let Carol know!

Lodging Details

- Hyatt Regency Washington on Capitol Hill
- 400 New Jersey Avenue, N.W., Washington, DC 20001
- Phone: 202/737-1234
- Group Number: CSTATM3
- Room Rate: \$269.00 + tax per room single (~\$320 ttc)
- We need 180 room-nights, so please book early and let Carol know about your plans!

Transportation Details

- Please make plane reservations as soon as possible.
- Shown are results of skyscanner.com search on July 24. Your mileage may vary...
- We have a budget to maintain so please book early and let Carol know about your plans!

Meal	s D	etai	IS
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- Meals covered in cost of conference
 - Oct 28 evening reception.
 - Oct 29-30 breakfasts.
 - Oct 29-30 lunches.

Denver Int'l (DEN)	Albuquerque (ABQ)	Orlando Int'l (MCO)
***** Stops *****	**** Stops ****	***** Stops *****
Direct \$416	Direct \$460	Direct \$200
1 stop \$346	1 stop \$337	1 stop \$222
	2+ stops \$607	
**** Airlines ****	**** Airlines ****	**** Airlines ****
\$346 airTran	\$607 airTran	\$242 airTran
\$688 Alaska Airlines	\$711 Alaska Airlines	\$222 Delta
\$416 Frontier Airlines	\$482 American Airlines	\$694 Frontier Airlines
\$351 jetBlue	\$337 Frontier Airlines	\$211 jetBlue
\$412 United	\$370 jetBlue	\$200 United
\$375 Airline combinations	\$460 United	\$238 US Airways
	\$340 Airline combinations	

San Francisco Int'l (SFO)	El Paso Int'I (ELP)	Houston (HOU)
**** Stops ****	***** Stops *****	***** Stops *****
Direct \$418	Direct none	Direct \$313
1 stop \$306	1 stop \$297	1 stop \$310
2+ stops \$580	2+ stops \$692	2+ stops \$417
**** Airlines ****	**** Airlines ****	**** Airlines ****
\$306 airTran	\$692 airTran	\$335 airTran
\$497 Alaska Airlines	\$725 Alaska Airlines	\$445 American Airlines
\$424 American Airlines	\$300 American Airlines	\$330 Delta
\$318 Frontier Airlines	\$309 Delta	\$459 Frontier Airlines
\$486 Sky Aviation	\$297 United	\$310jetBlue
\$486 Sun Country Airlines		\$313 United
\$418 United		\$476 Airline combinations
\$418 Virgin America		
\$358 Airline combinations		

- Meals NOT covered in cost of conference
 - Oct 28 (travel day) meals.
 - Oct 29-30 dinners.
 - Oct 31 (travel day) meals.

Presentation Details

- Presenters: We'll use a template similar to before, covering the Who, What, Where, When, Why and How of your project.
- Presenters: We'll also need a summary quad chart as part of your presentation.
- Students: We will conduct a poster competition. The prize is TBD. Samples of "good" poster entries will be provided (on the web site? On the facebook page? TBD)

Attachment 2. ATM3 Draft Schedule

NOT SHOWN... Day 0, Monday, October 28, 2013 from 5-7pm: Corporate Sponsored Evening Poster Session and Discussion at the Hyatt Regency.

	Day 1: Tuesday, October 29, 2013		Day 2: Wednesday, October 30, 2013	
8:00 AM		8:00 AM		
8:15 AM	AM Hyatt Regency Capitol Room A		Registration	
8:30 AM			Hyatt Regency Capitol Room A	
8:45 AM				
9:00 AM	OPENING REMARKS	9:00 AM	DAY 2 OPENING REMARKS	
9:15 AM	WELCOME (TBD) FAA OPENING KEYNOTE SPEECH (G. Nield)	9:15 AM	2. HUNAAN CDACTTI ICUT DECEADOU (E A. Harin 4 ha 45 ania)	
9:30 AM	LEGISLATIVE OPENING KEYNOTE SPEECH (TBD)	9:30 AM	3: HUMAN SPACEFLIGHT RESEARCH (5 talks in 1 hr 15 min) 184. Comm'l Spacecraft Human Rating (CU-Klaus)	
9:45 AM	PROGRAMMATIC OVERVIEWS (3 talks in 45 min)	9:45 AM	255. Wearable Biomedical Equip (UTMB-Castleberry) 256. Centrifuge Testing (UTMB-Vanderploeg)	
10:00 AM	- FAA COE Welcome & Overview (Watts)	10:00 AM	294. Minor Injury Severity Scale (UTMB-Castleberry)	
10:15 AM	- COE CST Status Report (Davidian)	10:15 AM	295. EMF Effects on Implantable Devices (UTMB-Vanderploeg)	
10:30 AM		10:30 AM		
10:45 AM	Networking Break	10:45 AM	Networking Break	
11:00 AM		11:00 AM		
11:15 AM	- NASTAR (Henwood), Baylor College of Medicine (Clark), ERAU (TBD), SatWest (Barnett), UN Lincoln (Schaeffer), NASA ARC (TBD), DLR (Drescher)		2c: SPACE TRANSPORTATION OPS, TECH & PAYLOADS (4 talks in 60 min)	
11:30 AM			244. Autonomous RDV & Docking for Space Debris Mitigation (UF-Fitz-Coy), (FSU-Collins). (SU-Rock), (CU-Axelrad)	
11:45 AM				
12:00 PM		12:00 PM		
12:15 PM	Lunch		Lunch	
12:30 PM	Hyatt Regency Capitol Room B	12:30 PM	Hyatt Regency Capitol Room B	
12:45 PM		12:45 PM		
1:00 PM	1a: SPACE TRAFFIC MANAGEMENT AND OPERATIONS (2 talks in 30 min)	1:00 PM		
1:15 PM	186. Space Env MMOD Modeling & Prediction (SU-Close), (CU-Fuller-Rowell)		4: SPACE TRANSPORTATION INDUSTRY VIABILITY (4 talks in 60 min) 297. Task 301. Spaceport Regulations (MU-Howard)	
1:30 PM	1b: SPACE TRAFFIC MANAGEMENT AND OPERATIONS (3 talks in 45 min) 185. Unified 4D Trajectory (SU-Alonso) 258. Multi-disc Analysis of Safety Metrics (SU-Alonso) 247. Air & Space Traffic Considerations for CST (FIT-Villaire)		298. Task 302. Int'l Comm'l Space Regulations (MU-Fitzpatrick) 193. Role of COE CST in EFP (SU-Hubbard), (CU-Born)	
1:45 PM			133. Note by COL CST III ETT (30 Thabbata), (CO Both)	
2:00 PM				
2:15 PM	1c: SPACE TRAFFIC MANAGEMENT AND OPERATIONS (3 talks in 45 min)	2:15 PM	Placeholder for Allied Organization Presentations	
2:30 PM	257: Master's Launch & On-Orbit Ops Class (Cheetham) 187. Space Situational Awareness (CU-Scheeres) 220: Space Operational Framework (NMSU-Hynes)		CESTAC Closed Meeting in Parallel	
2:45 PM				
3:00 PM	Networking Break	3:00 PM	Networking Break	
3:15 PM	Networking Break		Networking break	
3:30 PM	228. Magneto-Elastic Sensing for SHM (NMT-Zagrai, Ostergren) 253. Ultra High Temp Composites (UCF-Gou, Kapat)		CLOSING REMARKS	
3:45 PM			FAA KEYNOTE SPEECH (TBD) LEGISLATIVE KEYNOTE SPEECH (TBD)	
4:00 PM			FINAL COMMENTS (TBD)	
4:15 PM	2b: SPACE TRANSPORTATION OPS, TECH & PAYLOADS (4 talks in 60 min) 241. High Temp Pressure Transducers (UF-Sheplak), (FSU-Oates) 293. Integration & Figuration of Payloads (NMSU Hyper)		Adjournment	
4:30 PM				
4:45 PM				
5:00 PM		5:00 PM		
5:15 PM	Adjournment	5:15 PM		

Attachment 3. Paper Banner Information

Here's some (hopefully useful) information regarding the paper banners that should be produced for the ATM3.

Why: The COE CST wants to visually demonstrate all the great work being done by students at the COE CST universities (both Member and Affiliate) so we decided to require (strongly request) that a banner be produced for each COE CST task for presentation at the ATM.

There will be a competition for the "Best Paper Poster" so we want you to put some effort into making it full of content (a.k.a. "steak") *and* making it look good (a.k.a "sizzle"). A prize will be awarded for "Best Banner". Judges, judging rules and prize(s) are all TBD.

Who: We need one paper banner per COE CST task. If multiple students are working on a single task, we expect a single paper banner. If a single student is working on multiple tasks, we expect multiple paper banners.

What: The paper banner will be produced by esigns.com. The students are required to provide a graphic file that can be printed on a specific banner product. The banner size we are using for the ATM3 is 23.5" x 63". At a recommended 150 dots-per-inch (dpi), that means the graphic to be produced should be 3525 pixels wide x 9450 pixels high. The banner will be presented in the "portrait" orientation.

- You can view the setup from the Esigns website here: http://www.esigns.com/creation/banner-stands_awesome-x-63x23-1-side/upload-file/
- The Esigns file setup and printing specs are here: http://www.esigns.com/file-setup-instructions.html

Paper posters from last year have been posted on the "Center of Excellence for Commercial Space Transportation" facebook page with "likes" and "dislikes" for the design (not content) of each. Please review the comments on the facebook page to see how to make your poster as good as possible and for tips on how to best present a winning poster for the competition!

 The URL for the facebook page is: https://www.facebook.com/media/set/?set=a.576289252413374.1073741827.139252652783 705&type=1

How: Your poster banner will be reviewed prior to printing. We ask that everybody save your poster at our shared dropbox folder named "ATM3 Posters". You will receive a separate email from dropbox inviting you to access this folder. Once the banner graphic has been reviewed, we'll upload it for printing and delivery.

When: The deadline for transferring your student poster to dropbox is October 14th.

For More Information: If you have any questions, please contact Fred Bowen (fredbowen@orionat.com), Tristan Fiedler (fiedler@fit.com) or Ken Davidian (ken.davidian@faa.gov).

BTW...

This size graphic caused problems with my machine's memory, so maybe it would be better to break it up into pieces and we can put it together in Esigns.

You might want to create a full-sized pdf and print it out as tiled 8.5x11 pages to see a mock-up before finalizing your design.

Attachment 4. FIT ATM3 Travel Guidelines

Below are the slightly revised set of guidelines that have been reviewed by Florida Tech's Sponsored Programs Office.

- 1. Each Traveler completes a FLORIDA TECH TRIP ITINERARY form by Sep 19, 2013 for review and approval by Tristan Fiedler and the Florida Tech Office of Sponsored Programs. Forms submitted after the deadline may not be eligible for reimbursement due to budget planning.
- 2. All Travelers are responsible for registering for ATM3 at www.coe-cst.org and booking all travel, including hotel, airfare, ground transport, etc.
- 3. Hyatt DC Capitol Hill hotel room charges for approved travelers under the conference rate will be paid for on-site in DC by COE CST Administration at the conclusion of the meeting.
- 4. In general unless stipulated otherwise, all travel expenses must be in accordance with FLORIDA TECH TRAVEL POLICY, e.g. Per Diem Rates, Mileage Rates, etc. Please note that the option for meals reimbursement is either ALL per diem or ALL ITEMIZED receipts showing items purchased. Per diem rates will be adjusted based on Meals provided by ATM3.
- 5. After ATM3, each Traveler must complete the FLORIDA TECH Travel Expense Form by Nov 15, 2013 including receipts for all expenses.
- 6. Items NOT Reimbursed [due to budget limitations for ATM3 a/o policy]:
- Car Rental & Parking Fees in Washington DC
- Alcohol
- Meals provided by the Tech Mtg
- Hotel extra room charges (e.g. extra nights, pay per view movies, mini-bar, room service, etc)
- Incidental personal items (e.g. haircut, clothing, toiletries)
- Expenses incurred due to casualty or theft
- 7. All documents must be emailed to Tristan Fiedler with subject line "ATM3::FIT::TRAVEL". Also, please copy Carol Gregorek at carolgregorek@orionat.com.

FLORIDA TECH TRIP ITINERARY

http://www.fit.edu/pmm/documents/doc mgr/142/TripItinerary 2013.pdf

TRAVEL EXPENSE FORM

http://www.fit.edu/pmm/documents/doc_mgr/142/TravExpRprt2013a.xls

TRAVEL POLICY (PARTIAL)

http://www.fit.edu/pmm/documents/doc_mgr/359/Travel%20and%20Business%20Expense%20 Policy.pdf

FAA AST COE CST EXECUTIVE COMMITTEE TELECON #18 - MONDAY, 18 NOVEMBER 2013

SCHOOL	PRIMARY	SECONDARY	ADDITIONAL
CU	☐ Dr. David Klaus	☐ Dr. Penina Axelrad	 □ Dr. George Born □ Dr. Tim Fuller-Rowell □ Dr. Dan Scheeres □ Mr. Brad Cheetham
FIT	☐ Dr. Tristan Fiedler	☐ Dr. Sam Durrance	□ Dr. Dan Kirk□ Dr. Nat Villaire
FSU	☐ Dr. Farrukh Alvi	☐ Dr. Emmanuel Collins	□ Dr. Billy Oates□ Dr. Rajan Kumar
NMSU	Dr. Patricia Hynes		Ms. Joylynn Watkins
NMT	☐ Dr. Warren Ostergren	☐ Dr. Dave Westpfahl	□ Dr. Keith Miller□ Dr. Andrei Zagrai
SU	☐ Prof. Scott Hubbard	☐ Dr. Juan Alonso	□ Dr. Sigrid Close□ Dr. Steve Rock
UCF	☐ Dr. Jay Kapat	☐ Dr. Jan Gou	☐ Dr. Ali Gordon☐ Dr. Lin An
UF	□ Dr. Norm Fitz-Coy	☐ Dr. Mark Sheplak	
UTMB	Dr. Jim Vanderploeg	Dr. Tarah Castleberry	Dr. Charles Mathers
CESTAC	Dr. Joseph Rothenberg	Ms. Carissa Christensen	
OAT	■ Ms. Carol Gregorek	☐ Mr. Fred Bowen	
FAA AST	☐ Mr. Ken Davidian		
FAA	□ Dr. Patricia Watts	□ Dennis Flath	☐ John Reinhart (UAS COE)
NASA	☐ Mr. Alex MacDonald	☐ Dr. Dan Rasky	□ Mark Redlinger

0.1 Executive Committee Meeting Information

- Dial-In #: 712-432-0075, Participant Access Code: 141648#
- The next telecom is scheduled for January 13, 2014, 1-2PM Eastern Time

0.2 Attachments: None

1. STARTERS (ADMINISTRIVIA)

1.1 FY13Q3 Quarterly Reporting Status

- Status of quarterly reports, for the period July 1 Sept 30, 2013, due on Oct 31, 2013.
 - Complete:
- Expense report; No Progress report:
- Submitted:
- Progress report; No Expense report:
- Delinquent:

1.2 Third Annual Technical Meeting (ATM3)

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1.3 Fourth Annual Administrative Meeting (AAM4)

- WHO: Required attendance by primary or secondary EC members from each COE CST member university. Voluntary attendance from CESTAC members, students and additional Pls from COE CST member and affiliate universities. COE CST will pay travel, per diem and registration expenses of required attendees only.
- WHAT: Meeting to discuss administrative topics, interact with industry members.
- WHERE & WHEN: Current favorite option includes: Washington, DC in conjunction with (either the day before or after) the FAA Commercial Space Transportation Conference, February 5-6, 2014.

- WHY: The primary goals of the AAM4 are:
 - Adoption of the Self-Governance Document
 - Maximize industry exposure and interaction with COE CST and CESTAC.
- HOW: TBD...

1.4 Website Status (Fred Bowen)

No updates.

1.5 Budget and Finance Stuff

- Emails giving final FY13 allocations sent to all PIs. GRFs composed and submitted. Three were processed. The rest are awaiting proposals in grants.gov.
- FY14 funding cycle begins.

1.6 Task Close-Outs

 Carol Gregorek has been working hard to compile all the necessary documentation and information for orderly close out of tasks that have been completed in the past. Ken will work with her to finalize this activity.

1.7 General Comments

Transition of COE CST administrative management from KD to TF in process.

2. SELF-GOVERNANCE SUBCOMMITTEE REPORT (LEAD, NAT VILLAIRE)

- Members: Nat Villaire/FIT (Chair), Norm Fitz-Coy/UF
- Subcommittee Update:

3. COLLABORATION SUBCOMMITTEE REPORT (LEAD, TRISTAN FIEDLER)

- Members: Tristan Fiedler/FIT (Chair), Mark Sheplak/UF, Penny Axelrad/CU, Pat Hynes/NMSU, Warren Ostergren/NMT, Jim Vanderploeg/UTMB, Dan Scheeres/CU
- CESTAC Update:
 - Membership Types
- Affiliate Members:
 - Completed: NASTAR/UTMB, SatWest/NMSU
 - In Process: UofN/NMSU, BCM/UTMB, ERAU/NMSU
 - Educational/Outreach Requests
- Subcommittee Update: DARPA Meeting

4. STRATEGIC PLANNING SUBCOMMITTEE REPORT (LEAD, DAVE KLAUS)

- Members: Dave Klaus/CU (Chair), Sigrid Close/SU, Andei Zagrei/NMT, Billie Oates/FSU, Dan Kirk/FIT, Juan Alonso/SU, Scott Hubbard/SU
- Subcommittee Update:
- Self-Governance Document Topics of Discussion
 - Membership Definitions and Terms
 - Leadership Definitions and Terms
 - Policy Review

5. ANY OTHER BUSINESS

- 2014 COE CST EC Telecon Dates
 - Jan 13
 - Feb 10 (may be preempted by AAM4 if held in Feb as currently planned)
 - Mar 10
 - Apr 14
 - May 12
 - June 16 (not June 9?)
 - July 14
 - Aug 11
 - Sep 8
 - Oct 14 (moved to Tuesday due to Columbus Day)
 - Nov 10
 - Dec 8 No Telecon
- Dial-In # and participant access code may change... stay tuned and stay alert!
- Times will stay the same as before, 1-2PM Eastern time

