



NOvA Working Group Meeting

December 20, 2006

2:00 – 4:00 PM

Snake Pit

Agenda

- 1) Feedback on interchanges between the Directorate/Project and OHEP [Hugh Montgomery/John Cooper/ Mike Procario]
- 2) NOvA Project Report [John Cooper/Ron Ray]
 - a) Impact of Continuing Resolution
 - b) Status on NOvA's EA
 - c) Progress on Preparations for Director's CD-2/3a Review
- 3) Preparations for Director's CD-2/3a Review (Jan. 30 – Feb. 1. 2007) [Dean Hoffer]
 - a) Charge
 - b) Agenda
 - c) Report Outline and Reviewer Assignments
- 4) Review NOvA Timeline [Dean Hoffer]
- 5) Status of Action Items [John Cooper]

Review Charge Changes

This charge is for the Committee to conduct a Director's CD-2/3a Review of the proposed NOvA project at Fermilab. The review is to assure that all the requirements will be met for DOE to approve CD-2/3a. The DOE CD-2/3a review is currently schedule for March 6-8, 2007.

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CD-2 is approval of the Performance Baseline. The Performance Baseline is developed based on a mature design (Preliminary Design or a Technical Design Report), a well-defined and documented scope, a resource-loaded detailed schedule, a definitive cost estimate, defined Key Performance Parameters and some additional project management documents. Approval of CD-2 authorizes submission of a budget request for the Total Project Cost (TPC).

CD-3a is approval to start limited Construction. NOvA is requesting CD-3a for infrastructure and site preparation work to support the start of building construction. The design and engineering should be essentially complete, a final design review performed, all environmental, safety and security criteria are met, the project is ready to begin construction, implementation, procurement, or fabrication. DOE approval of CD-3a provides authorization to complete procurement and construction of the specified work.

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Review Charge Changes (continued)

DOE's guidance to NOvA is not to exceed \$200M for the sum of the MIE plus Cooperative Agreement Building Construction. Based on the scope of work presented during the review, the committee is to assess whether the project can be built within the guidance. If it is determined that the work scope as presently defined cannot be completed within the guidance, then the Far Detector mass is the relevant scope parameter.

As part of this assessment the questions listed in Attachment 1 of this charge should be addressed. Additionally the review committee is to review and comment on the Project's response and actions taken on the recommendations from the Director's CD-1 Review of NOvA on February 28 - March 2, 2006 and from the DOE CD-1 Review conducted April 4-6, 2006. Constructive comments on presentation content, format, and style are also requested.

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- Deleted:** Base + Cooperative Agreement Building Construction Contingency
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Review Charge Att. 1 Changes

Cost

- Is the Work Breakdown Structure (WBS) appropriate for the project scope?
- Do the cost estimates for each WBS (or cost) element have a sound documented basis and are they reasonable?
- Does an obligation profile exist? How does it compare with the funding guidance?

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Draft Agenda

Tuesday, Jan. 30

8:00 – 8:45 AM	45	Executive Session (Comitium, WH2SE)	Ed Temple
9:00 – 9:10 AM	10	Introduction (1 West for all Talks)	Hugh Montgomery
9:10 – 9:25 AM	15	Scientific Performance Requirements	Mark Messier or Gary Feldman
9:25 – 10:15 AM	50	Project Overview	John Cooper
10:15 – 10:50 AM	35	Project Contingency/Risk Analysis	Ron Ray
10:50 – 11:05 AM	15	BREAK	
11:05 – 11:30 AM	25	Site and Building	Steve Dixon
11:30 – 12:00 AM	30	Scintillator	Stuart Mufson
12:00 – 12:15 PM	15	Fiber	Carl Bromberg
12:15 – 1:15 PM	60	LUNCH (WH2 Crossover)	
1:15 – 1:35 PM	20	PVC and Extrusions	Rich Talaga
1:35 – 2:05 PM	30	Extrusion Modules	Ken Heller
2:05 – 2:35 PM	30	Electronics and DAQ	Leon Mualem
2:35 – 3:05 PM	30	Near/Far Detector Assembly	Dave Ayres
3:05 – 3:20 PM	15	BREAK	
3:20 – 4:20 PM	60	BREAKOUT SESSIONS	
		1) <u>Site and Building</u> (Blackhole – WH2NW)	
		2) <u>Commodities - Scintillator, Fiber, PVC</u> (1 East, WH1E)	
		3) <u>Extrusion Module Production</u> (Snakepit, WH2NE)	
		4) <u>Electronics and DAQ</u> (Racetrack, WH7X)	
		5) <u>Far and Near Detector Assembly</u> (1 North, WH1NW)	
4:30 – 6:30 PM		Executive Session (Comitium, WH2SE)	

Draft Agenda (continued)

Wednesday, Jan. 31

8:00 – 8:30 AM

Cost and Schedule Executive Session
(Comitium, WH2SE)

Ed Temple

8:30 – 10:30 AM

BREAKOUT SESSIONS

1) Site and Building (Blackhole –
WH2NW)

2) Commodities - Scintillator, Fiber,
PVC (1 East, WH1E)

3) Extrusion Module Production
(Snakepit, WH2NE)

4) Electronics and DAQ (Racetrack,
WH7X)

5) Far and Near Detector Assembly (1
North, WH1NW)

6) Cost, Schedule and Management
(Comitium, WH2SE)

10:30 – 10:45 AM

BREAK (Outside Comitium, WH2SE)

10:45 – 12:30 PM

BREAKOUT SESSIONS – Continued
(Same breakouts and locations as for the
8:30 – 10:30 AM sessions)

12:30 – 1:30 PM

LUNCH (WH2 Crossover)

1:30 – 2:30 PM

NOvA Respond to Committee Questions
from 1st Day (Comitium, WH2SE)

2:30 – 6:30 PM

Executive Session and Report Writing
(Comitium, WH2SE) Breaks taken as
necessary.

Draft Agenda

(continued)

Thursday, Feb. 1

8:00 – 9:30 PM

Subcommittee Working Sessions and
Report Writing

10:00 – 2:00 PM

Closeout Dry Run with working lunch
(Comitium, WH2SE) Breaks taken as
necessary.

2:00 PM

Closeout (1 West, WH1SW)

Draft Report Outline and Reviewer Assignments

Executive Summary	<u>Ed Temple</u>
1.0 Introduction	<u>Dean Hoffer</u>
2.0 Science	<u>Heidi Schellman,</u> and All
3.0 Site and Building (WBS 1/2.1)	<u>Karen Hellman,</u> Elaine McCluskey
4.0 Commodities – Scintillator/Fiber/PVC (WBS 1/2.2, 1/2.3 & 1/2.4)	<u>Linda Stutte,</u> Joe Ingraffia
5.0 Extrusion Module Production (WBS 1/2.5)	<u>Dmitri Denisov,</u> Heidi Schellman
6.0 Electronics, Trigger DAQ (WBS 1/2.6 & 1/2.7)	<u>Jonathan Lewis,</u> Erik Gottschalk
7.0 Detector Assembly	
7.1 Near Detector (WBS 1/2.8)	<u>Rich Stanek,</u>
7.2 Far Detector (WBS 2.9)	Pat Hurh
8.0 Cost	<u>Jeff Sims,</u> Ken Domann
9.0 Schedule	<u>Ken Domann,</u> Jeff Sims
10.0 Project Management (WBS 1.9 & 2.10)	<u>Mike Lindgren,</u> Dean Hoffer

Draft Report Outline and Reviewer Assignments (continued)

11.0 Charge Questions	
TECHNICAL	
11.1 Are the technical specifications clearly stated and documented?	<u>Heidi Schellman</u>
11.2 Can the design be built? Does the design meet the technical specifications? Is it a reasonable design?	<u>Rich Stanek/ All</u>
11.3 Does the baseline design meet the project's objectives (mission need)?	<u>Heidi Schellman</u>
COST	
11.4 Is the Work Breakdown Structure (WBS) appropriate for the project scope?	<u>Jeff Sims/ All</u>
11.5 Do the cost estimates for each WBS (or cost) element have a sound documented basis and are they reasonable?	
11.6 Does an obligation profile exist? How does it compare with the funding guidance?	
SCHEDULE	
11.7 Is the schedule well developed and appropriately structured by specifying relationships, predecessors, successors, critical path, resource loaded, etc?	<u>Ken Domann/ Jeff Sims</u>
11.8 Are the durations for the activities and overall schedule reasonable and achievable with the assumed resources?	
11.9 Does the schedule contain appropriate levels of milestones, sufficient quantity of milestones for tracking progress and do they appear to be achievable?	
11.10 Does the schedule include activities for design reviews, which include assessment of the designs readiness for procuring prototypes, preproduction and production materials?	

Draft Report Outline and Reviewer Assignments (continued)

MANAGEMENT	
11.11 Is there an appropriate management organizational structure in place to accomplish the design and construction?	<u>Mike Lindgren/ Dean Hoffer</u>
11.12 Is the organization structure well documented, responsibilities defined and appropriate for the scope of work?	
11.13 Are there adequate staffing resources available or planned for this effort?	
11.14 Is there a funding plan available or proposed to meet the resource requirements to realize the project?	
11.15 Has a Risk Plan been developed, risks identified, risks analyzed, risk responses planned/implemented, risk monitoring/control process established and do they seem appropriate?	
PROCUREMENT	
11.16 Have the critical procurements been identified and are they included in the schedule with adequate lead time built in?	<u>Ken Domann</u>
11.17 Have critical make vs. buy decisions been evaluated in conjunction with the scope and is that reflected in the baseline cost estimate, schedule and technical risk plan?	<u>Jeff Sims</u>
11.18 Are the designs final and procurement packages prepared to the degree appropriate to initiate construction as scheduled for infrastructure and site preparation work to support the start of building construction?	<u>Elaine McCluskey</u>

- Note underlined names are the primary writer.

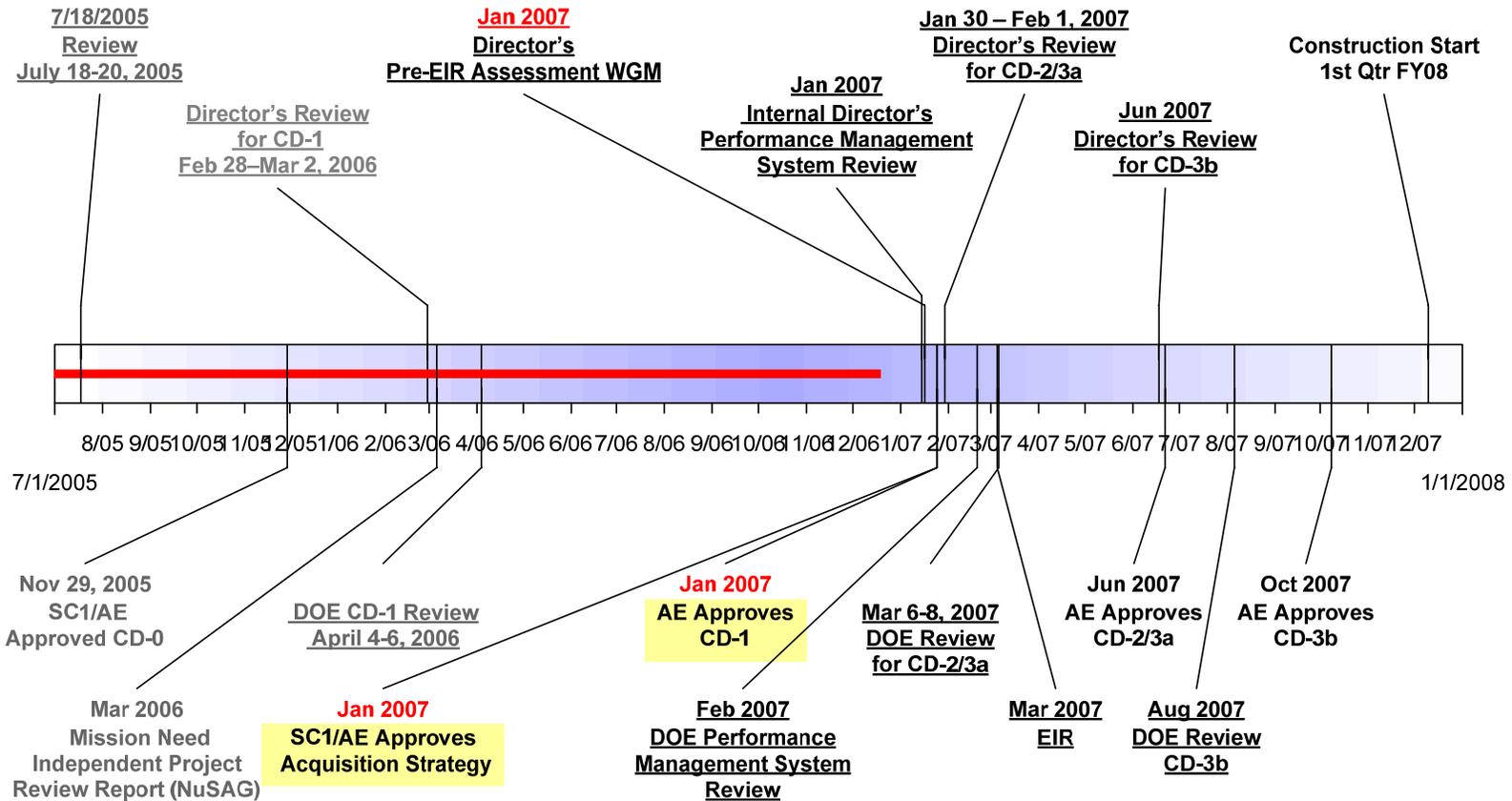
Draft Reviewer Breakout Assignments

1) Site and Building (Blake Hole, WH2NW)	Karen Hellman, Elaine McCluskey
2) Commodities – Scintillator/Fiber/PVC (1 East, WH1E)	Joe Ingraffia, Linda Stutte
3) Extrusion Module Production (Snakepit, WH2NE)	Dmitri Denisov, Heidi Schellman
4) Electronics and DAQ (Racetrack, WH7X)	Erik Gottschalk, Jonathan Lewis
5) Far and Near Detector Assembly (1 North, WH1NW)	Pat Hurh, Rich Stanek
6), Cost, Schedule and Management (Comitium, WH2SE)	Ken Domann, Mike Lindgren, Dean Hoffer, Jeff Sims, Ed Temple



DRAFT NOvA Project Timeline for Critical Decisions & Reviews

Updated 19-Dec-06



Note: Text in Red indicates change from prior version



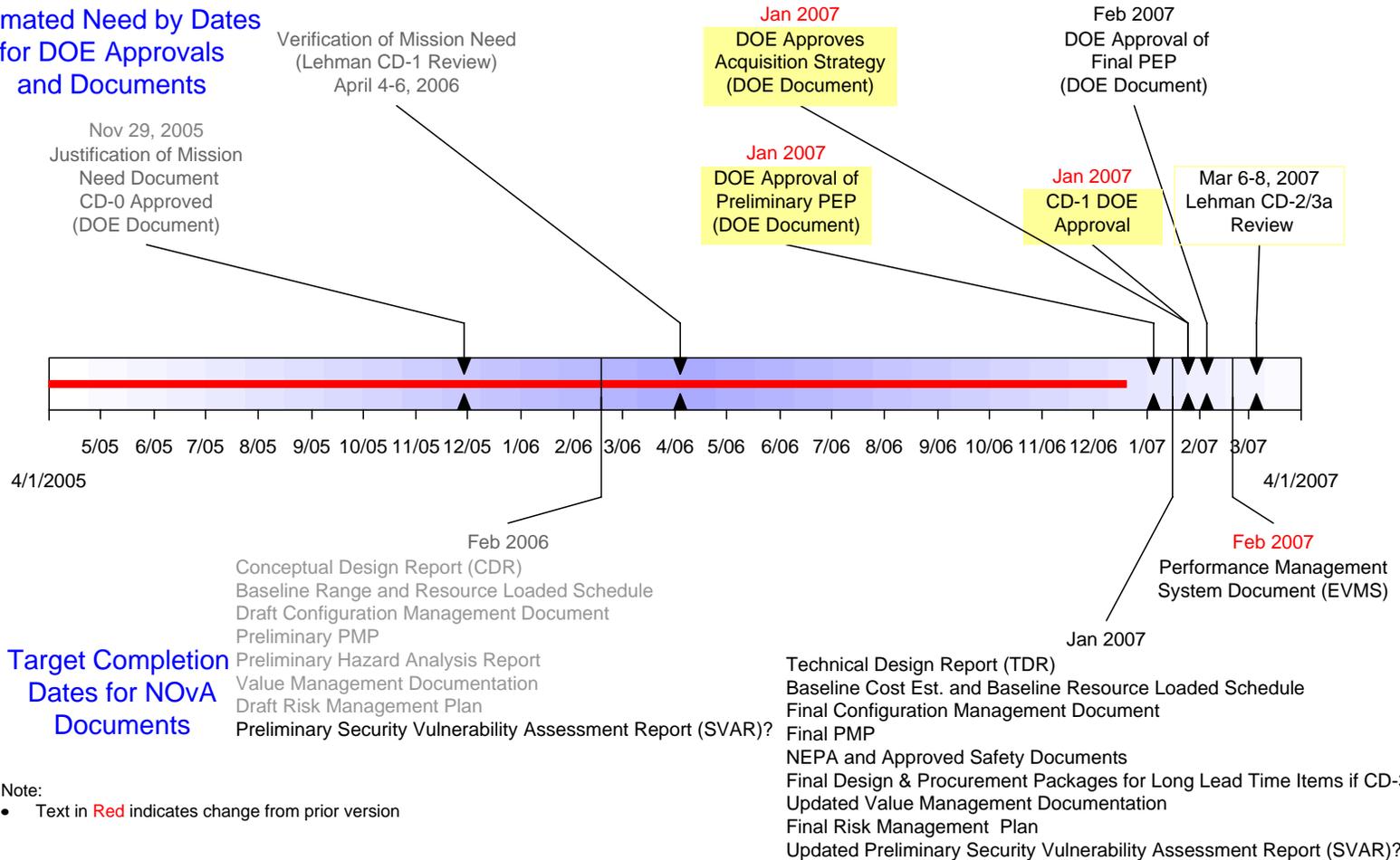
NOvA Project

Draft Critical Design Prerequisites

Updated 19-Dec-06



Estimated Need by Dates for DOE Approvals and Documents

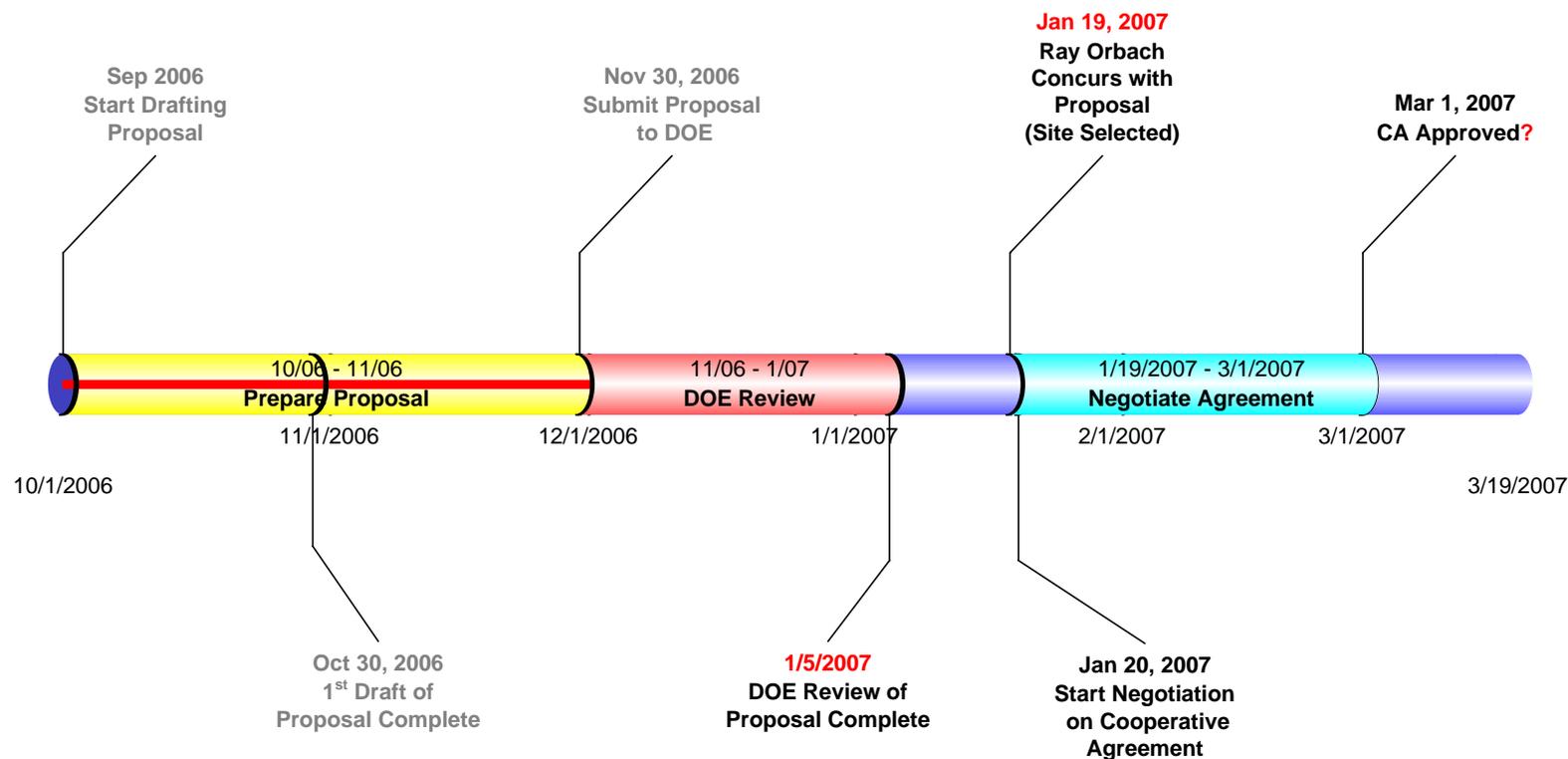




NOvA Project Proposal/Cooperative Agreement Draft Process



Updated 19-Dec-06



Note:

- Text in Red indicates change from prior version

Action Items

Rollover Items:

- a) NOvA to develop a scorecard on how the 14 contractor requirements from DOE O 413.3a Attachment 2 are met for the full NOvA project overall and how they are met, as applicable, for the Cooperative Agreement. This scorecard is to be presented at a future NOvA Working Group Meeting. [John Cooper/ Ron Ray]
- b) NOvA to document NOvA's internal procurement/approval process and present at a WGM. [John Cooper/ Ron Ray]

New Items:

- c) Talk with Steve Tkacsyk to determine what potential backup dates are available for the Lehman Review if current March 6-8, 2007 date needs to be moved [Pepin Carolan]
- d) Talk with Steve Tkacsyk on what the breakout sessions might be for DOE Review, since the breakouts were different between the Director's and DOE's CD-1 reviews. [Pepin Carolan]
- e) Schedule when to hold a working group meeting to focus on EIR Preparation. [Dean Hoffer/John Cooper]