Department of Commerce • National Oceanic & Atmospheric Administration • National Weather Service

NATIONAL WEATHER SERVICE INSTRUCTION 40-201
MARCH 29, 2004

Planning
QUAD Charts, NWSPD 40-2

PROCEDURES FOR DEVELOPING QUAD CHARTS

NOTICE: This publication is available at: http://www.nws.noaa.gov/directives/.

OPR: CFO1 (L. Mervilde)   **Certified by:** CFO/CAO (I.T. David)
Type of Issuance: Initial

SUMMARY OF REVISIONS:

Signed by   March 15, 2004
Irwin T. David   Date
Chief Financial Officer/
  Chief Administrative Officer

QUAD Chart Procedures

1. Introduction: National Weather Service (NWS) Policy 40-2 establishes the policy for the development of program QUAD Charts by the Financial Management Centers (FMCs) as well as the review and submission of the QUAD charts to the NWS Assistant Administrator (AA) by the Office of the Chief Financial/Chief Administrative Officer (CFO/CAO). QUAD charts concisely describe the status of the previous month's activities for the development, integration, modification and procurement of NWS programs. QUAD charts also alert management to program issues in advance, to prevent potential problems from causing program completion delays.

2. Purpose: The purpose of this instruction is to provide procedural guidance to FMCs on the development and submission of QUAD charts for the NWS AA.

3. Description and Responsibilities: At the request of the NWS AA, FMCs will prepare QUAD charts in accordance with the guidance from the NWS AA Memo dated April 2000 (included as Appendix A), as well as the supplemental guidance issued by CFO/CAO Budget Formulation Division (CFO1) in late 2002 (Appendix B). If a FMC wishes to develop a QUAD chart that has not been requested by the NWS AA, the FMC must develop the QUAD chart and provide a copy and explanation of the necessity of the chart to the NWS AA. The chart must be approved by the NWS AA before it is included in the monthly QUAD chart package.

4. FMC QUAD Chart Process: After the NWS AA requests the development of a QUAD chart for a particular program, or approves a QUAD chart requested by the FMC (FMC Focal Points are listed in Appendix C), the FMC will:

a. Develop a QUAD chart that represents program progress in the following areas: Performance Parameters, Schedule, Key Issues/Risks, and Budget/Funding. A QUAD chart template is provided in Appendix D. The QUAD chart should describe all activity for these areas for the previous month.

b. Classify the program criteria as development, integration, modification and/or procurement, and list the appropriate code (corresponding first letter) for all criteria that pertain to the program. (See Appendices A and D.)

c. Color-code each quadrant as Green, Yellow, or Red, depending on the status of the program. A detailed description of the color-coding system is provided in Appendix A.

d. In the bottom, right-hand corner of the QUAD chart, state whether the program is or is not executable. (See Appendix D.)

e. In the bottom left-hand corner of the QUAD chart, list the final day of the previous month to reflect the month that the chart represents. (See Appendix D.)

f. Submit final QUAD chart(s) to CFO1 no later than the 15th of each month, and coordinate and confer with CFO1 regarding any feedback, comments and/or questions during the CFO1 review process.

5. <u>CFO/CAO QUAD Chart Process:</u> This process consists primarily of collecting, reviewing, and submitting the QUAD charts to the NWS AA. CFO1 works with the FMCs to ensure that the QUAD charts are accurate and consistent from month to month. CFO1 will:

a. Collect QUAD charts from the responsible FMCs by the 15th of each month.

b. Review each QUAD, noting any changes from the previous month, and ensure consistency with agency established budgets, program goals and policies. When necessary submit questions/comments to FMCs.

c. Work with the FMCs to resolve any issues that arise during the review process.

d. Submit the final QUAD charts, including a cover sheet noting significant changes from the previous month, to the NWS AA no later than the 25th of each month, and provide courtesy copies of the final QUAD chart package to the NWS Deputy AA, CFO and Deputy CFO.

e. QUAD charts will be uploaded to the following website for FMC retrievals: http://www.nws.noaa.gov/cfo/secure_budget/monthly_quad_charts.htm no later than the end of the month. CFO1 provides the FMCs with the username and password required to view the charts on this secure site.

Appendix A

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL WEATHER SERVICE
1325 East-West Highway
Silver Spring, Maryland 20910-3283
THE DIRECTOR

APR 1 3 2000

MEMORANDUM FOR: Directors, All NWS Headquarters Offices

FROM: John J. Kelly, Jr.

SUBJECT: QUAD Charts

I want you to prepare, on a monthly basis, a QUAD Chart for each of your key development, integration, modification and procurement programs. The intent of the charts is to concisely describe the previous month's activities and provide an assessment that alerts us to program issues early enough to provide assistance and guidance to prevent potential or actual problems from getting worse or impacting program baselines.

A sample quad chart, a brief explaination of what information should be included, and a list of programs requiring a chart are attached. Keep in mind that other than in the program name, acronyms should be avoided. The key is to provide updated information and flag potential problems and issues early so they do not create surprises. The acid test is--if you were a senior NWS or NOAA executive with just a few minutes to get a sense of important program accomplishments or issues, would you get it from the QUAD chart. If not, the chart is not properly constructed.

Attachments:
-QUAD Chart
-Notes
-List of Programs

CC:
W/MB4 - S. Gallagher
W/MB4 - D. Rivelli
W/OSD5 - R. Saffle
W/OH1 - J. Ingram
W/OSO1 - D. Hess
W/OSO1 - R. Ahlberg
W/OSO2 - W. Brockman
W/OSO3 - J. McNulty
W/OSO4 - J. Belville
W/OSD24 - W. Seguin

Distribution:
W/CFO - T. David
W/CIO - S. Wakid
W/NCEP - L. Uccellini
W/OM - G. Mandt
W/OH - G. Smith
W/OSO - W. Telesetsky
W/OSD - H. Glahn
W/APO - P. Nipko

Printed on Recycled Paper

THE ASSISTANT ADMINISTRATOR
FOR WEATHER SERVICES

- TRANSITION POWER MANAGEMENT SYSTEM

- EVANSVILLE RADAR (INTERIM AND PERMANENT)

- NOAA WEATHER WIRE REPLACEMENT

- RADIOSONDE REPLACEMENT SYSTEM

- CENTRAL RADAR COLLECTION

- ADDITIONAL WEATHER RADIO TRANSMITTER CONTRACT

- NEXRAD PRODUCT IMPROVEMENT (A CHART FOR EACH INITIATIVE)

- ASOS (A CHART FOR EACH INITIATIVE)

- AWIPS BUILD 5

- AHPS

- NOAA WEATHER RADIO (NWR) VOICE IMPROVEMENT

- NWR TRANSMITTER NETWORK EXPANSION

Program Name (R/D/I/P/M)

Director: PM:

Prime Contractor:

Performance Parameters

	Threshold/ Baseline	Actual	Variance
Performance Requirement			
Range	75 nmi	85 nmi	+15nmi
CEP	30m	40m	-10m
Cost	$98M	$90M	+$8M (+8%)
Schedule	14Mos	12Mos	-2 Mos (-14%)

Schedule

(CY)

98 99 00 01 02 03 04 05

First Flight

Flight Test (DT&E)

Dedicated IOT&E

LRIP

MS III

RAA

IOC

Key Issues/Risks

Meeting user expectations
- software capability
- software availability

Requirement - state of art mismatch

Risk: Ops & Maintenance Funding Shortfall
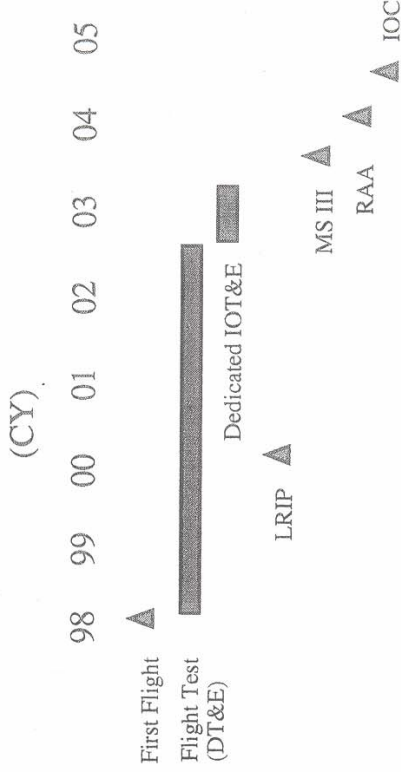
Budget/Funding ($M FY01 PB)

	Prior Years	FY01	FY02	FY03	FY04	FY05	Cost to Complete	Total
Dev	1.0	2.0	3.0	4.0	5.0	6.0	8.0	29.0
			(1.5)	(1.2)				
PROC	1.0	2.0	3.0	4.0	5.0	6.0	8.0	29.0
Total	2.0	4.0	6.0	8.0	10.0	12.0	16.0	58.0
Quant.	3	1	1	2	2	2	0	11

Program IS/IS NOT Executable

Mr. John Jones/APO/Mar 31, 2000

Notes:

1. Show program name and indicate R for research, D for development, I for integration, P for production, or M for Modification -- more than one may be appropriate.

2. On left side, provide Director's, and Program Manager names and office symbol AND on right, Prime Contractor, including location.

3. Provide the important performance-related parameters/information for the program and their current status. "Performance Parameters" should be shown where applicable. Always reflect baseline cost and schedule parameters.

4. Show key past/future events/milestones; tailor years and events; include acquisition milestones but make relevant to end user.

5. Programmatic issues. Identify the key issues and risks you. If program isn't executable state why here.

6. Program funding. As a rule of thumb, show $ in millions, and show quantities, if applicable. Delete unused rows. Identify funding allocation (e.g. development, integration, production) . If there is a significant shortfall show it. Use the current PB number as baseline

7. Executability statement: Program is either executable within the PB and projected performance and schedule baseline or not. If the program is not executable state why in Issues block. Also explain other executability caveats. Color executability box to match statement -- blue executable; red not executable.

8. Red/Yellow/Green rating: Provide assessment of performance, schedule and funding. Put the appropriate letter (R, Y, G) in the circle, so it shows in black and white.

Green = All aspects progressing satisfactorily. Problems may exist, but appropriate solutions are available

Schedule slippage, if any, does not affect approved schedule completion date. Costs are not expected

to exceed approved funding levels.

Yellow = Not quite right. Some event, action or delay occurred that impairs progress against major

objectives.

Red = Not making the numbers. Some event, action or delay occurred that seriously impedes successful

accomplishment. Such a set-back requires restructuring or reprogramming.

Appendix B

Quad Chart Coordination and Quad Template Follow-up (Supplemental Guidance)

Title:
- Font size has been reduced
- List Program title, and in parentheses list Program type per General Kelly's guidance

Program Parameters:
- List brief description of program (1-2 sentences)
- Per General Kelly, for programs that are not yet operational, list a current e*stimated actual* for the program cost and schedule
  - o i.e. what is your current estimate of the final program cost and schedule?
- Threshold – Actual = Variance

Schedule:
- Each schedule should include: Task, Task Completion, Baseline, and Milestone
- Legend remains at the bottom of the quadrant
- Schedule quadrant is larger than in previous quad charts
- Do not include unnamed subtasks (represented by a triangle) in the schedule
- Per General Kelly, schedules should ***not*** be re-baselined
  - o A schedule slippage should be noted in the Key Issues/Risks quadrant as soon as it is anticipated (i.e. if it is known the month before that it will occur, it should be noted)
  - o The slippage should be removed from the Key Issues/Risks quadrant 1 quarter after it occurs; the baseline should not be adjusted

Key Issues/Risks:
- List only issues or risks, not facts or comments
- Note schedule slips (see above)
- Note significant budget shortfalls

Budget/Funding:
- $M.00 in current year President's Budget (out 2 decimal places)
- Report current year (FY03), 4 years out and a "Cost to Complete" column
- Update only ***once*** per year when new PB is incorporated
- Any significant shortfalls should be noted in Key Issues/Risks quadrant

Other:
- Bottom left corner should read: Contact Name/W/Office/Final Date of Month
  - o i.e. the quads submitted on November 15, were dated October 31, 2002
  - o Example for a quad chart submitted on Nov. 15:
    - ▪ Greg Cate/W/OST1/October 31, 2002
- There is a text box in the lower right hand corner for the page/quad number

Appendix C

QUAD Chart FOCAL POINTS

CIO
NCEP
OCWWS
OST
OOS
OHD
IA

Appendix D

Program Title (Program Type, i.e. R/D/I/P/M)
Quad Chart Template

Director: Name
PM: Name

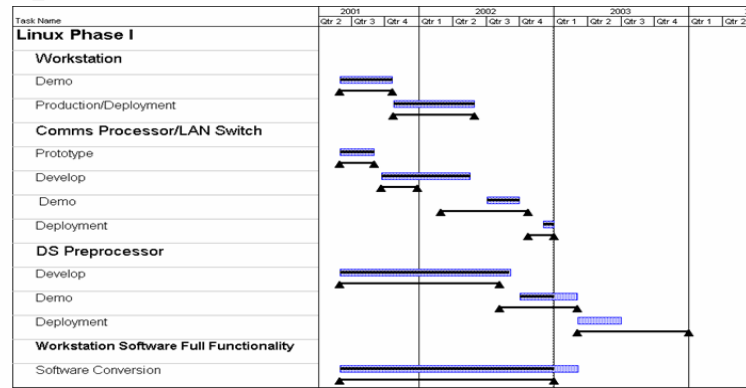Prime Contractors: Name
Location

(G) ## Performance Parameters

Brief description of program. See below for Requirement, Threshold, Actual and Variance examples.

Requirement	Threshold	Actual	Variance

Requirement A

Requirement B

Etc.

Cost

Schedule

(G) ## Schedule (FY)

Task Name	2001 Qtr 2	Qtr 3	Qtr 4	2002 Qtr 1	Qtr 2	Qtr 3	Qtr 4	2003 Qtr 1	Qtr 2	Qtr 3	Qtr 4	20 Qtr 1	Qtr 2

Linux Phase I

Workstation
Demo
Production/Deployment
Comms Processor/LAN Switch
Prototype
Develop
Demo
Deployment
DS Preprocessor
Develop
Demo
Deployment
Workstation Software Full Functionality
Software Conversion

Task [____] Task Completion [████] Baseline ▲——▲ Milestone ◇

(G) ## Key Issues/Risks

- Issue:

- Risk:

(G) ## Budget/Funding ($M FY04 PB)

	Prior Years	FY03	FY04	FY05	FY06	FY07	To Complete	Total
Major Budget Category A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Major Budget Category B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Etc.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quantities (if applicable)	0	0	0	0	0	0	0	0

Program Is Executable

Contact Name/W/Office/Final Date of Month

Page #