



Working Group 7: Legacy Network Best Practices Update

Status Update

March 18, 2015

Kyle Malady, Verizon, Chair

WG7 – Legacy Best Practices Update

Charter

WG7:

The majority of the best practices recommended by CSRIC address the reliability and resiliency of legacy communications networks, including 9-1-1 networks and services. CSRIC III took a fresh look at the 9-1-1 best practices, but the other legacy best practices have not been examined since CSRIC II. This Working Group will review the legacy best practices to identify where additional practices may be necessary given changes in technology, practices, or observed reliability trends. The Working Group will then recommend changes to the existing set of best practices to address the topics revealed by the foregoing analysis. Finally, the Working Group will consider revisions to best practices proposed by the Alliance for Telecommunications Industry Solutions and recommend how to incorporate these changes into the wider body of best practices.

Included Item:

Consider an issue related to security of manholes and expedited restoration following a associated outage.



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Current Objectives

March 2014 (Complete):

- Consider an issue related to security of manholes and expedited restoration following a associated outage.

September 2014 (Complete):

- Gap analysis of existing legacy best practices, identify where additional practices may be necessary given changes in technology, practices, or observed reliability trends.
- Recommend changes to the existing set of legacy best practices to address the topics revealed by the gap analysis process.
- Consider revisions to best practices proposed by the Alliance for Telecommunications Industry Solutions (ATIS) and recommend how to incorporate changes into the wider body of best practices.

March 2015 (Complete):

- Recommend revisions to the best practice prioritizations based on CSRIC II WG6 recommended process.



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Current Members (15)

WG-7 Member

Kyle Malady (Chair)

Mary Boyd

Tim Collier

Shahin (Shaw) Daneshkhah

Victor DeVito

Stacy Hartman

Robin Howard

Rick Krock

John Marinho

Bob Oenning

Andre Savage

Andy Scott

Gigi Smith

Kathy Whitbeck

Christian Vogler

Company

Verizon

Intrado

Sprint-Nextel

Sprint-Nextel

AT&T

CenturyLink

Verizon

Alcatel Lucent

CTIA

911RP

Cox Communications

NCTA

APCO

Nsight

Gallaudet University



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Introduction

In this Final Report, WG7 exams and provides relevant recommendations regarding the revision of the Best Practice prioritizations developed by CSRIC II WG6.

Key recommendations of WG7 include the following:

- The three priority structure (i.e., Critical, Highly Important, and Important) developed by CSRIC II WG6 should be superseded by a restructured two category design that more clearly identified the public safety and disaster related Best Practices.
- Compliance with the Best Practices should remain voluntary in nature as originally designed and should not be subject to further regulatory activity or mandates.
- The FCC should continue to endorse and encourage the use of Best Practices by communication providers.
- The Best Practices should be reassessed by future CSRIC's to ensure that advances in technology, practices, and/or observed reliability trends are adequately and appropriately addressed.



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Objectives

The CSRIC IV Working Group 7 has been charged with recommending revisions to the Best Practice prioritizations developed by CSRIC II WG6.

Objective 1: Determine the Purpose of Best Practice Priorities

- WG7 was to consider the original charter requirement assigned to CSRIC II Working Group 6 and better understand how and why that group designed the three priorities based schema.

Objective 2: Consider Revisions to Structure and Definition

- WG7 considered through in-depth discussions the overall need for and effectiveness of the existing status identifiers.

Objective 3: Develop New Best Practice Status Structure & Modify Best Practice Priorities

- WG7 developed a new status structure and reviewed the existing Best Practices and re-categorized using new categories developed.



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Scope

The Working Group reviewed the Best Practice prioritization schema of “Critical,” “Highly Important,” and “Important” that was designed and approved during CSRIC II

- Applied enhancements to the Best Practice structure of 1,022 current Best Practices outlined in Attachment 1 of the Final Report
- WG7 considered how the existing structure could have been interpreted and how that interpretation may have impacted the utilization of certain Best Practices
- WG7 explored the regulatory environment associated with the use of Best Practices and whether the assignment of Best Practice priorities could be influenced (e.g., higher or lower than warranted) by ongoing current events
- Finally, the Working Group reviewed and reaffirmed previous guidance that industry Best Practices remain voluntary in nature

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Methodology

- WG7 established a small core team to perform a deeper dive into the Best Practice status priorities and to develop a proposal for the entire team's consideration
- The core team fully studied the purpose and intent of the prioritization status, including a detailed review of the original definitions and structure
- The core team debated the usefulness of priorities to the communications industry, regulatory issues, and the overall effectiveness of the current structure
- The core team developed team recommendations and performed an independent review of 1,022 Best Practices to test whether the enhancements were appropriate
- Following review, the proposal was presented to the full team, further deliberated, the full team provided input and changes, and the recommendations were finalized



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Analysis

Working Group 7 addressed several issues in evaluating the current priority structure. In debating these, the analysis signaled that an adjustment to the structure was reasonable in light of the knowledge gained since their introduction in 2011.

1. Effectiveness of the Priority Based System

- Best Practice statuses do not necessarily improve or enhance their use by industry
- Given extensive set of keywords how does the status improve results?

2. Perception of Status Assignment

- Status assignments are generally assigned by CSRIC Working Groups
- Assigning statuses to a Best Practice is highly subjective driven by group/individual perception
- Level of expertise review tends to rank Best Practices higher or lower

3. Regulatory Environment

- Reviewed situations where certain Best Practices have been cited in regulatory dockets
- Considered how current status system may be inadvertently influenced by regulatory environment

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Analysis - Continued

4. The Ranking of Best Practices

- All Best Practices are equal in that they address a problem or class of problems
- Utilization of a Best Practice is best determined by experts with sufficient knowledge of the topic
- The existing system implies an order into which to implement a set of Best Practices
- Some companies may be motivated not to institutionalize the review of all Best Practices

5. Category versus Priority

- Advantages of Best Practices being arranged in categories versus a prioritization
- Eliminate the perception that “lower” ranked Best Practices are less important
- A category system better delineates that Best Practices should be considered holistically
- Best Practices should not be implemented in a priority order



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Findings

1. The use of a prioritization schema which in effect “ranks” Best Practices and implies an order in which to implement a given set of Best Practices is inconsistent with the intent and design of Best Practices
2. Ranking Best Practices, such as critical versus important, has unintentionally promoted the devaluation of Best Practices
3. Priority ranking on Best Practices may be inappropriately raised or lowered based on the group or individual’s perceived importance which may inappropriately influence industry implementation
4. Assigning priorities to a Best Practice is a highly subjective process that is primarily driven by the perspective of the group or individual reviewing the Best Practices



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Findings - Continued

5. WG7 identified that the FCC’s principal need for Best Practices to be:
 - Ensure the continuity of service for 911 operations (e.g., the mechanism delivering calls to Public Safety Answering Points) and;
 - Continuation of essential services (not 911) needed to recover from a disaster on a large scale basis versus just a single office.

6. WG7 created two revised categories defined as follows:

Public Safety & Disaster

Best Practices that are deemed vital for 911 mechanisms (e.g., keeps 911 up) and those that promote wide spread recovery following a disaster.

Standard

All other Best Practices



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Findings - Continued

- Revising the categorization of Best Practices into new categories provides the following benefits over the existing priority based system:
 - Replaces a system where lower prioritized (ranked) Best Practices are devalued and seen as less important
 - Creates a system that categorizes Best Practices instead of a ranking them
 - Diminishes priority ambiguity and perception issues that occur during Best Practice updates
 - Restores all Best Practices to equal importance as originally designed
 - Eliminates the possible misconception of new companies or individuals that Best Practices should be implemented in some priority order
 - Provides a more generalized grouping when searching and implementing Best Practices



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Recommendations

1. The Working Group recommends that the CSRIC Council accept our Final Report regarding the revision of the Best Practice status system.
2. The Working Group recommends that the existing three priority system (Critical, Highly Important, and Important) be discontinued and replaced with a new two category system of (Public Safety & Disaster) and (Standard). The two revised categories will be defined as follows:

Public Safety & Disaster

Best Practices that are deemed vital for 911 mechanisms (e.g., keeps 911 up) and those that promote wide spread recovery following a disaster.

Standard

All other Best Practices

3. The Working Group recommends that the Best Practices that include the updated statuses (found in Attachment 1 of the Final Report) be approved and applied on a going forward basis.



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Recommendations

4. The Working Group recommends that following the approval of this Report, the FCC incorporate the modified Best Practice status into the production online FCC and industry websites for general use of the industry.
5. The Working Group recommends that a future CSRIC or trusted industry group be tasked to assist the FCC with the updating previous CSRIC approved Best Practice deletions, additions, or modifications that are not included in this Final Report. This will ensure that the new categories are properly assigned to these Best Practices.



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Conclusions

Working Group 7's Final Report:

- Evaluated and recommended adjustments to the Best Practice status system from a three category priority system to a new two category system.
- Defined the categories to better identify public safety and essential service continuity related Best Practices.
- Enhanced the Best Practice status definitions to ensure that all Best Practices hold the same level of importance and mitigates ambiguity when modifications are being made in the future.
- Reviewed over 1,000+ Best Practices and applied the new statuses to create a baseline for future CSRIC's and users of Best Practices.

