

IEEE CQR BREAK OUT SESSION ON
QUALITY OF SERVICE

1998 Focus Area Session Chair	Nick DeVito, AT&T
1998 Focus Area Champion:	Nick DeVito, AT&T
1998 Focus Area Editor:	Esmat Mahmoud, AT&T
1999 Focus Area Session Chair	Mike Hopkins, AT&T
1999 Focus Area Champion:	Kaveh Hushyar, AT&T
1999 Focus Area Editor:	Joan Caravano, AT&T
<u>Participants</u>	

- [Definition](#)
- [Metrics](#)
- **World Class Performance**
- **Best Practices**
- **Best-in-Class Recognition**

Material from 1998 Workshop (5/5, Indian River Plantation Marriott Resort, Stuart, Florida):

I. DEFINITION

Service Quality is services that is consistent with customer expectations and stated obligation

- Customer Care; Customer expectation
- Performance
- Value

Service Quality is not . .

1. not elegant architecture
2. not bells and whistles
3. not PR/advertising
4. reliability
5. service unavailability
6. blocking
7. high priced
8. network-focused

II. METRICS “Attributes”

What the group did was brainstorm about the possible metrics for the three areas defined. We used the voting method to narrow down the input to the highest three or four items in each area. What we arrived at is a framework for possible categories for measurements; what needs to still be done is to start an open dialogue with industry players to flush out and/or define what actual measurements should be tracked in order to satisfy these element or attributes

II.1 Customer Care

1. Problem resolution: measure

- *number of issues resolved on first call,*
- *time to acknowledge trouble,*
- *time to resolve trouble*

2. Simple interface: measure customer rating of intercalation (with real human)

3. clarity of communication

- *is bill understandable (survey customers or and/or count how many troubles are attributed to misunderstanding of the bill)*
- *measure marketing offer level of understanding (how to use the network)*

4. access to life/line “emergency call” service: 100% measure (to be completed at future workshop)

II.2 Technical Performance

The first three attributes received the most support. The last three are listed in the order on number of support received:

1. Availability of functionality: measure (to be completed at future workshop)
2. Interoperability /transparency: measure (to be completed at future workshop)
3. Conformance to service specifications: measure (to be completed at future workshop)
4. time to install/restore vs. customer due date
5. single point of contact: measure does it exist yes/no (also are these people well trained and qualified to satisfy customer questions and properly respond to troubles)
6. outage impact: measure Outage Index??

II.3 Value

1. customer perception of service delivered (worth what is paid for): conduct surveys; we need to define customer perception

2. cost to customer to overcome non conformance to service obligation: collect date of possible customer impact after outages or troubles
3. count number of complaints
4. Record churn rate attributed to quality: keep data (surveys) of customers who left due to reduced quality
5. willingness/ability to pay : measure (to be completed at future workshop)

Material from 1999 Workshop (4/20, Rancho Bernardo Inn, San Diego California):

Service Quality can be measured by value delivered throughout the life of customer experiences in the following phases:

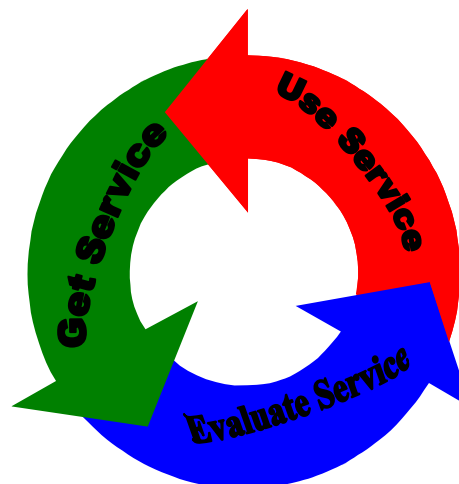
- *Getting Service*
- *Evaluating the Service*
- *Using the Service*

The group broke out into 3 groups representing each phase of service delivery. Each group brainstormed about the definition and measurement for their phase.

The framework to be built upon and/or enhanced for the brainstorming session: Revisit and define “customer values” and associated measurements from the customer perspective using the model below.

Customer Value: Service Delivery

- Service Delivery
- Communication



- Service Availability
- Problem Resolution
- Clarity of Billing
- Perceived Value of Service
- Conformance to Service Specifications

- Clarity of Marketing offers
- Perceived Value of New/Existing Service
- Communication

The group defined the following values and metrics for each phase of Service Quality:

◆ **Get Service – Values & Metrics**

Service Delivery

- Timely
- Accurate
- Trouble free for “n” days

Communication

- Commitment (reasonable & mutually agreed to)

Service Description

- Timely
- Accurate
- Easy to Understand
- Easy to Obtain

◆ **Use Service – Values & Metrics**

Service Availability

- Call set up time
- Uninterrupted service (# of dropped calls)
- % of time connectivity completed in “x” seconds
- Quality of connection
 - Voice
 - Echo
 - Noise
 - Transmission delay
- Time to release service
- Data transmission errors (e.g., packet drops)

Ease of Use (end user interface)

- # of calls for the installation and configuration
- # of calls no trouble found
- # of calls to understand how to manage service
- # of steps to set up navigation of service interface structure (e.g., setting up personal voice mail)

Security

Problem Resolution

- Time to get required information
- User manual
- Phone
- E-mail
- Web
- Mail
- Fax
- # of issues resolved on first contact
- time to acknowledge “request for help”

Billing

- Accuracy of billing
- Timeliness
- Clarity (e.g. # of calls requesting info)

◆ *Evaluate Service – Values and Metrics*

Perceived Value

- Frequency of use
- Cost vs. benefit
- Desirable enhancements
- Reliability
- Availability
- Other options
- Ease of upgrade

Clarity of Marketing Offer

- Delivered vs. promise
- Cost
- Functionality/features
- Availability
- Understandability
- Usability

PARTICIPANTS

The 1998 working group participants consisted of the following industry professionals.

Name	Company
Aduskevicz, PJ	AT&T
Duell, Kenneth	AT&T
Healy, John	Bellcore
Higuera, Ronald	Carnegie Mellon University
Lawton, Ray	Ohio Satte University
Machol, Richard	AT&T
Mahmoud, Esmat	AT&T
Marchisio, Laura	CSELT
Neswadba, Horst	Siemens AG
Parton, Dennis	AT&T
Rak, Dan	Lucent
Schiavone, James	AT&T
St. Peter, Chuck	Ameritech
Thayer, Whitey	FCC

The 1999 working group participants consisted of the following industry professionals.

NAME	TITLE	COMPANY	STATE/ COUNTRY
Blue, Richard	TCQR Workshop Treasurer.	Siemens ICN	Florida, U.S.A.
Bonelli, Raymond	CQR/Conf. Arrangement Chair	Lucent Tech.	Illinois, U.S.A.
Caravano, Joan	Manager	AT & T	New Jersey, U.S.A.
Chen, Chi-Ming	Prin. Tech. Staff Member	AT & T	New Jersey, U.S.A.
Chiles, Wayne	Member Tech. Staff	Bell Atlantic	Virginia, U.S.A.
DelCol, Chris	Dir, Global Cust. Sat.	Ascend Comm.	California, U.S.A.
Dietl, Thomas	Dipl.-Ing. Univ.	Deutsche Telekom AG	Nurnberg, Germany
Doran, Marvin	Mem. Sci. Staff	Nortel	Ontario, Canada
Dreyer, Elaine	Technical Manager	Lucent Technologies	Illinois, U.S.A.
Harrison, John		British Telephone	Suffok, England
Hushyar, Kaveh	Division Manager	AT & T	New Jersey, U.S.A.
Macwan, Anil	Mem. Tech. Staff	Lucent Tech.	Illinois, U.S.A.
Neeman, Susan (Sam)	Director Tech. Sup.	Cisco Systems, Inc.	California, U.S.A.
O'Reilly, Kathleen	Consumer	Michigan	District of Columbia,

	Representative	Consumer Federation	U.S.A.
Rak, Daniel	Technical Manager	Lucent Technologies	Illinois, U.S.A.
Thayer, Whitey	Senior Engineer	Federal Commun. Commission	Washington, D.C., U.S.A.
Walsh, David	Sr. Manager Escalation Support	Ascend Commun.	Sophia Antipolis, France
Yaniro, Dan	District Manager	AT & T	New Jersey, U.S.A.