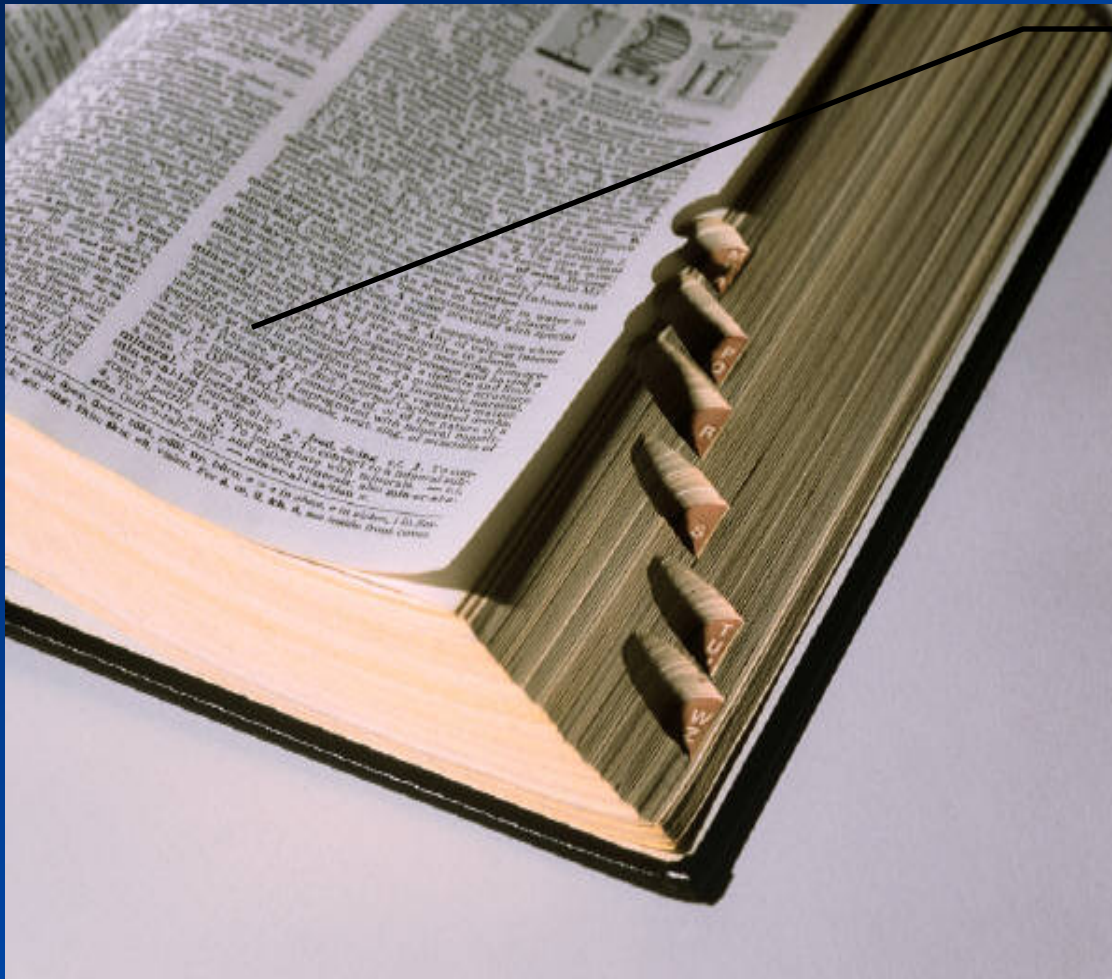# SOTS Overview

Agenda

- What is SOTS?

- Why use SOTS?

- SOTS-specific Terminology

- The SOTS – TL connection

- Where do I start?   A SOTS checklist

- SOTS field demystified

- Timeline considerations

- Reconciliation process

- Additional sources of information

What is SOTS?

SOTS: - *noun*. "**S**tandard **O**utage **T**emplate **S**ystem". A business process standard provided as a means to automate and/or centralize the exchange of outage data between the registered organization and their customers.

Why use SOTS?

- Outage details
- Population data

Problem Report / Outage Details

Service Provider Customer

Supplier Organization

Why use SOTS?

- **Promotes complete and accurate data representation**

- **Offers consistency when capturing details**

- **Efficient and economical**

- **Comprehensive enough to be useful to key users of the data**

SOTS-specific Terminology

Data File

Header Record
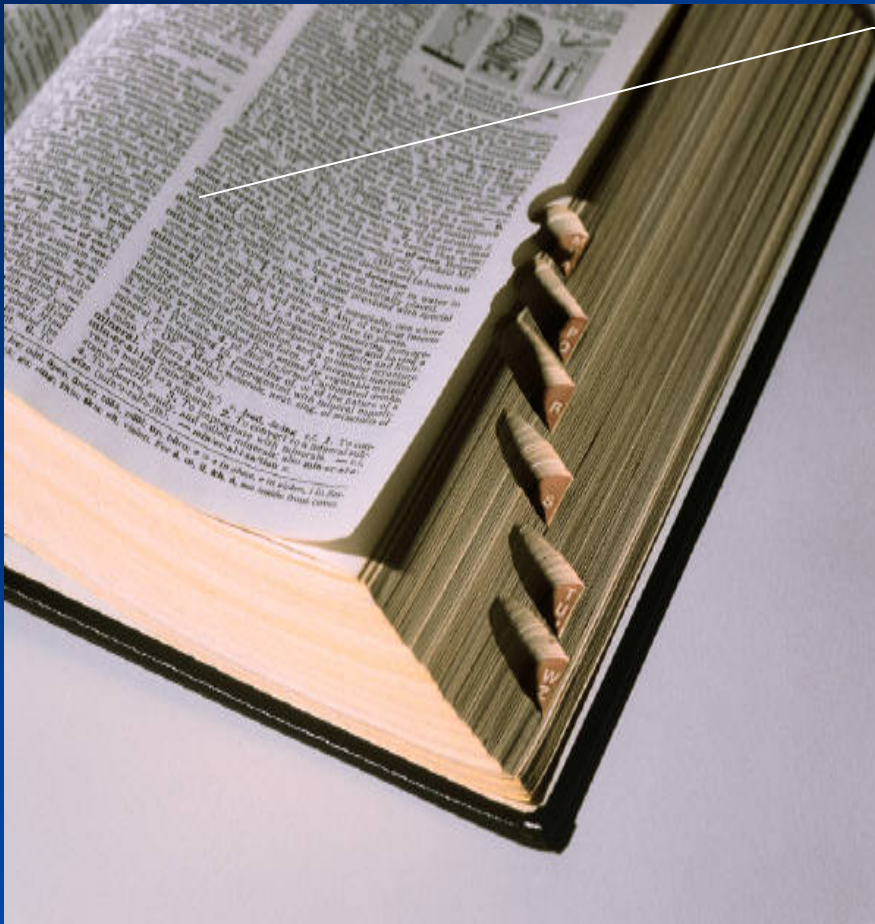
Data Record
*
Data Record
*
Data Record

Administrative File

Administrative Report

Optional

SOTS-specific Terminology

Header Record - The first record in each SOTS file submission. It provides the recipient information with which to determine what type of data is to follow.

SOTS Header Record

Mandatory	Field	Format
Yes	SOTS Revision	Number
Yes	Company Name	String (80 char max)
Yes	Date File Sent	YYYY-MM-DD
Yes	Sequence Number	Number
Yes	Response Email	String (80 char max)
Yes	Records In File	Number
No	Test Mode	'true' or 'false'

SOTS-specific Terminology
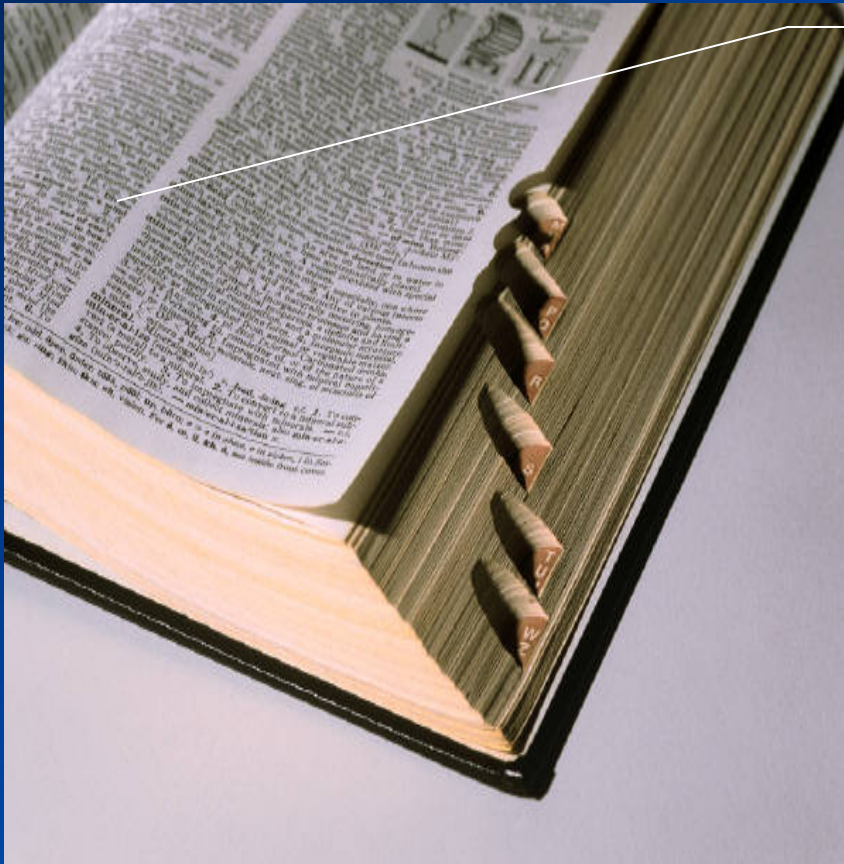
Data Record - A record that contains the information collected for an individual outage event using the Standard Outage Template.

SOTS Data Record

| Data Type	Field Name	Field Type [length]
Mandatory	Outage ID Number	alphanumeric [15 char]
Mandatory	Record Status	alpha [10 char]
Mandatory	Company Name	alpha [50 char]
Mandatory	Partial Impact	NNN
Mandatory	Excess Time	Time [HHH:MM]
Dependent	Excess Time Details	Text [4096 char]
Mandatory	Inability to Access Time	Time [HHH:MM]
:	:	:
:	:	:
Mandatory	Amount of Service Affected	NNNNNNN
Mandatory	Type of Service Affected	alphanumeric [20 char]
Mandatory	Outage Classification	enumerated (See Outage Classifications worksheet)
Mandatory	Attributable To	enumerated (Customer, Product, External)
Optional	Description of Service Failure	Text [4096 char]
Optional	Root Cause Analysis	Text [4096 char]
Mandatory	Supplier Contacted?	enumerated (Y/N)
Dependent	Supplier Ticket Number	alphanumeric [20 char]

SOTS-specific Terminology
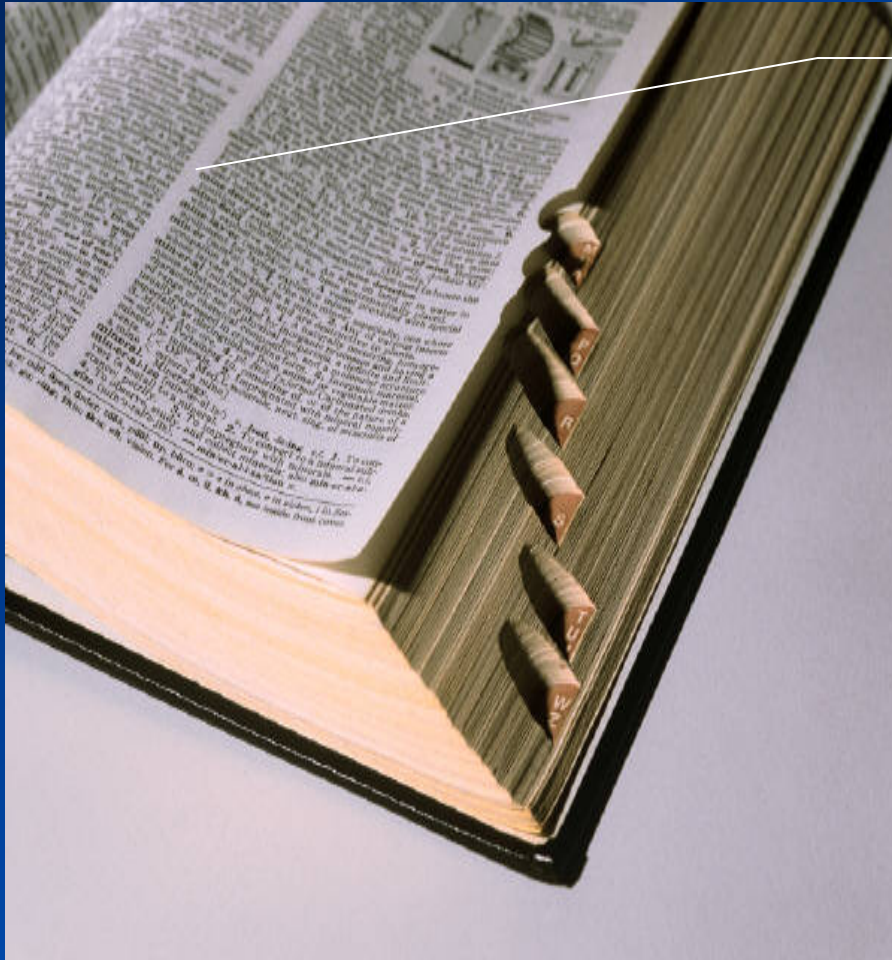
<u>Administrative Report</u> - A report that contains key fields from all data records for outage events that were recorded and transmitted for a single product category for a particular Organization for the reporting period.
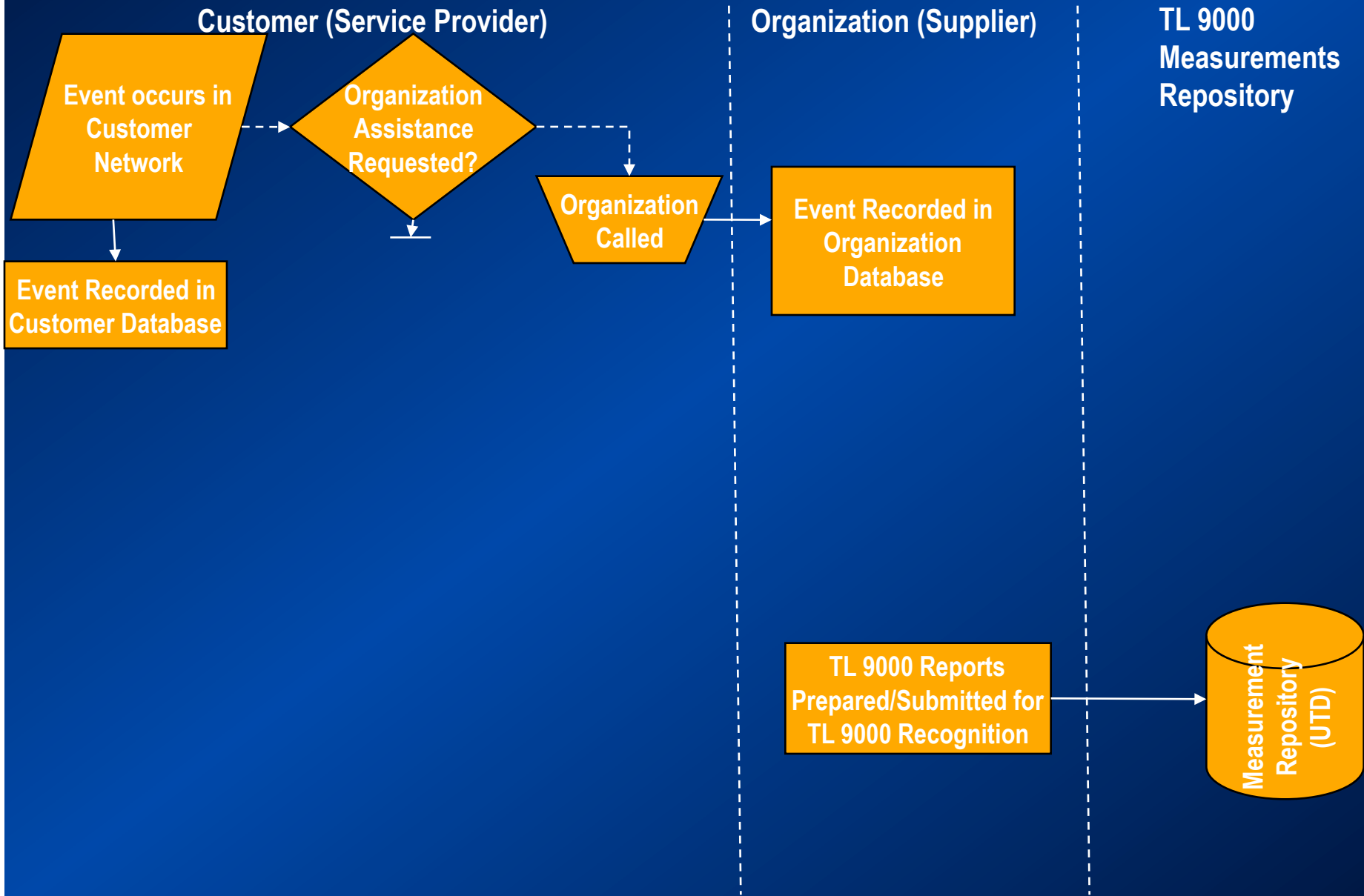
SOTS Administrative Report

Company	Company Name					
Product Category	Product Category					
Report Period (RP)	Period of Report					
Report Contact	Report Contact Name					
ReportContactPhone	Phone Number					
ReportContactEmail	email address					
SOTS Data Record Count	nnnn					
Duration Sums:						
All Total and Partial Outages	HHHHHH:MM:SS					
Attributable to Product	HHHHHH:MM:SS					
Attributable to Customer	HHHHHH:MM:SS					
Attributable to Other	HHHHHH:MM:SS					
Excess Time	HHHHHH:MM:SS					
Unable to Access Time	HHHHHH:MM:SS					
Install Base at end of RP (From Table A-2):						
Network Elements	nnn,nnn					
Terminations	nnn,nnn					
Record Summary						
Outage ID	Outage Classification	Atributable To	Total/ Partial	Sched ?	….	….
outage ID #	SOTS Classification *	Charge to *	T or P	Y or N	….	….

Optional

SOTS and Related TL Processes

Customer (Service Provider)

Organization (Supplier)

TL 9000 Measurements Repository

Event occurs in Customer Network

Organization Assistance Requested?

Organization Called

Event Recorded in Organization Database

Event Recorded in Customer Database

TL 9000 Reports Prepared/Submitted for TL 9000 Recognition

Measurement Repository (UTD)

SOTS and Related TL Processes

Customer (Service Provider) | **Organization (Supplier)** | **TL 9000 Measurements Repository**

- Event occurs in Customer Network
- Organization Assistance Requested?
- Organization Called
- Event Recorded in Customer Database
- Create/Transmit SOTS Records
- Event Recorded in Organization Database
- Reconcile Discrepancies
- Reconcile Discrepancies
- TL 9000 Reports Prepared/Submitted for TL 9000 Recognition
- Measurement Repository (UTD)
- TL 9000 Based Reports Prepared/Submitted for Customer

|	
Future Purchasing Decisions	Operations (Network Reliability)
Service Architecture	Scorecards

The SOTS – TL connection

- ➢ SOTS template comment section
- ➢ MHB section 6.1.4 (SO) and 6.2.4 (SONE)
- ➢ Appendix A Table A-1 Product Category
- ➢ Appendix A Table A-2 (Normalization Units)
- ➢ Appendix A Table A-3 (Network Element Impact Outage Definitions)
- ➢ MHB glossary
- ➢ Quest Forum website examples

Where do I start?

Partnership

Where do I start ?
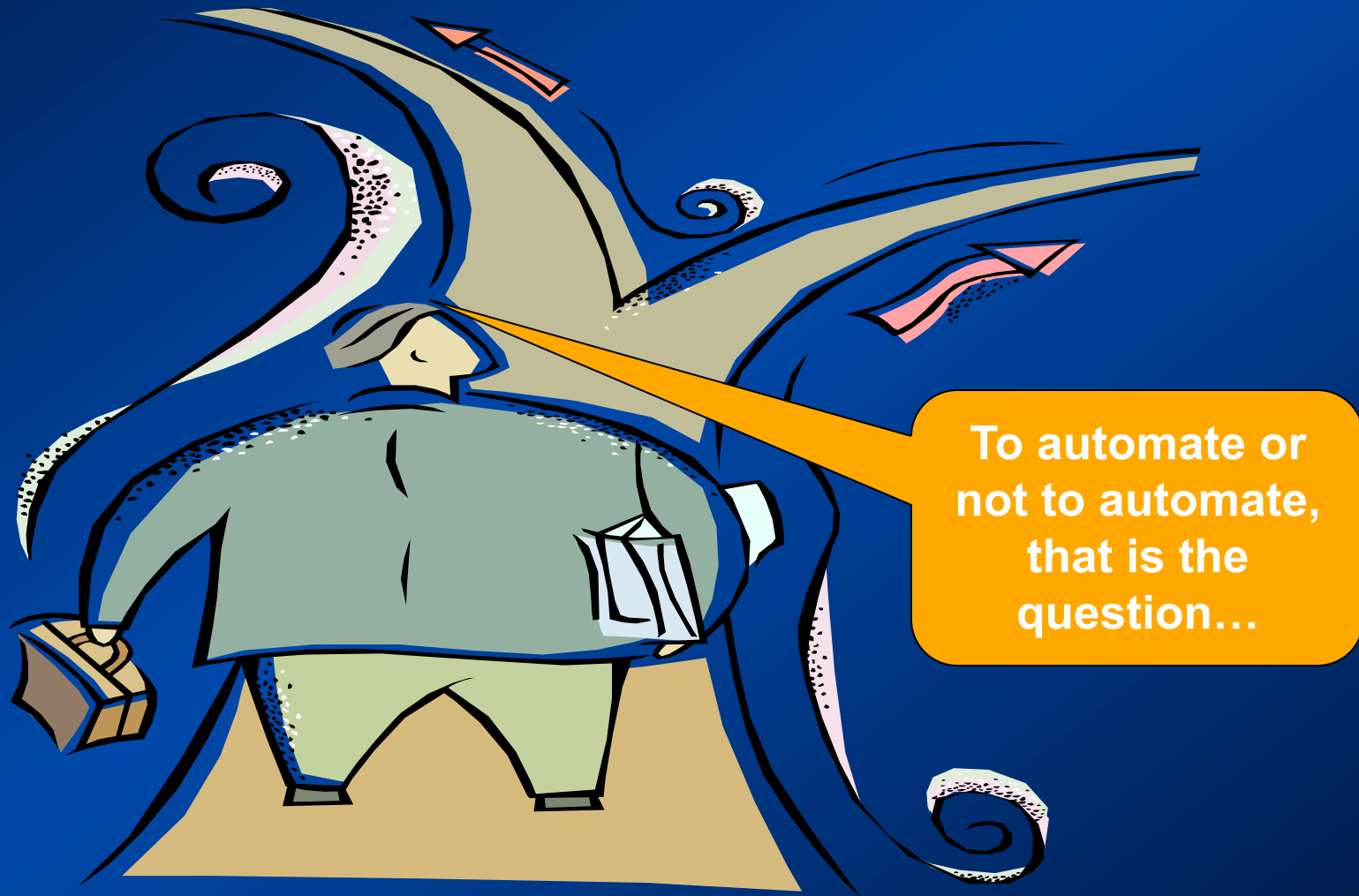
SOTS checklist

- ❑ Identify the Technical point of contact for both the Customer and the Organization

- ❑ Identify the Operational contacts for resolving differences i.e. 1st, 2nd, 3rd level

- ❑ Schedule a meeting for the Operational and Technical contacts to brief them on the SOTS process

- ❑ Agree on the Communication format, e.g. e-mail, FTP, UUCP

SOTS checklist

- ❑ Agree on the frequency and schedule of processing for Data Records
    - ▪ Batch vs Individual Record transmittal
    - ▪ Retransmission of data

- ❑ Special Email addresses to be used
    sots-data@company.com
    sots-admin@company.com

- ❑ Review the SOTS Template
    - ▪ How fields will be populated.
    - ▪ Formatting conventions used for each field

A SOTS field demystified

Data Type	Field Name	Field Type [length]
Mandatory	Outage ID Number	
Mandatory	Record Status	
Mandatory	Company Name	
Mandatory	Partial Impact	
Mandatory	Excess Time	
Dependent	Excess Time Details	
Mandatory	Inability to Access Time	
:	:	
:	:	
Mandatory	Amount of Service Affected	
Mandatory	Type of Service Affected	
Mandatory	Outage Classification	
Mandatory	Attributable To	
Optional	Description of Service Failure	Text [4096 char]
Optional	Root Cause Analysis	Text [4096 char]
Mandatory	Supplier Contacted?	enumerated (Y/N)
Dependent	Supplier Ticket Number	alphanumeric [20 char]

Amount of Service Affected

A SOTS field demystified

Field Name: Amount of Service Affected
Product Type: Sonet Transport System
Product Category: 3.2.2.1.2.1
Information Source: SOTS Template comments

Data Type	Field Name	Field Type [length]	Comments
Mandatory	Amount of Service Affected	NNNNNNN	**Numerical value of amount of service or network capacity affected. Only used when the NU is other than NE/System. If NE/System, the value should be 0. (NE/System uses Partial Impact value - see above.)**

A SOTS field demystified

<u>Field Name</u>: Amount of Service Affected
<u>Product Type</u>: Sonet Transport System
<u>Product Category</u>: 3.2.2.1.2.1
<u>Information Source</u>: MHB Appendix A Table A-2

	Table A-2	Measurement Applicability Table (Normalized Units)						
Product Category			**Outage Measurements**			**Software Measurements**		
Code	**Description**	**Problem Reports H,S,V**	**Service Impact H,S**	**Network Element Impact H,S**	**Return Rate H**	**Software Fix Quality S**	**Software Problem Reports S**
TL 9000 Measurement Symbols (see Table A-6)		**NPR**	**SO**	**SONE**	**FR**	**SFQ**	**SPR**
3.2.2.1.2	*Optical Carrier System*						
3.2.2.1.2.1	SONET/SDH Transport Systems	Network Element		ork Element	OC-1	Required	Same as NPR

OC-1

Sample XML file

```xml
<SOTSHeader>
    <SOTSRevision>1234</SOTSRevision>
    <CompanyName> SP1 Communications</CompanyName>
    <DateFileSent> 2009-03-02</DateFileSent>
    <SequenceNumber>11011426</SequenceNumber>
    <ResponseEmail>joe@jomail.com</ResponseEmail>
    <RecordsinFile>5 </RecordsInFile>
    <TestMode> False</TestMode>
  </SOTSHeader>

  <SOTSInfo>…All fields for version2.0 </SOTSInfo>
<OutageID>123</OutageID>
<RecordStatus>New or Revised or Deleted</RecordStatus>
<CompanyName>Cisco</CompanyName>
<TotalOutageDuration>01:02:03</TotalOutageDuration>
<PartialOutageDuration>22:00:00</PartialOutageDuration>
<Manufacturer>Cisco</Manufacturer>
<AmountServiceAffected>5</ AmountServiceAffected >
<TypeServiceAffected>OC-48</ TypeServiceAffected >
<OutageClassification>Hardware Failure</OutageClassification>
<DescriptionOfServiceFailure>this went down</DescriptionOferviceFailure>
<SupplierContacted>Y</SupplierContacted>
<SupplierTicketNumber>123456</SupplierTicketNumber>
</SOTSInfo>
```
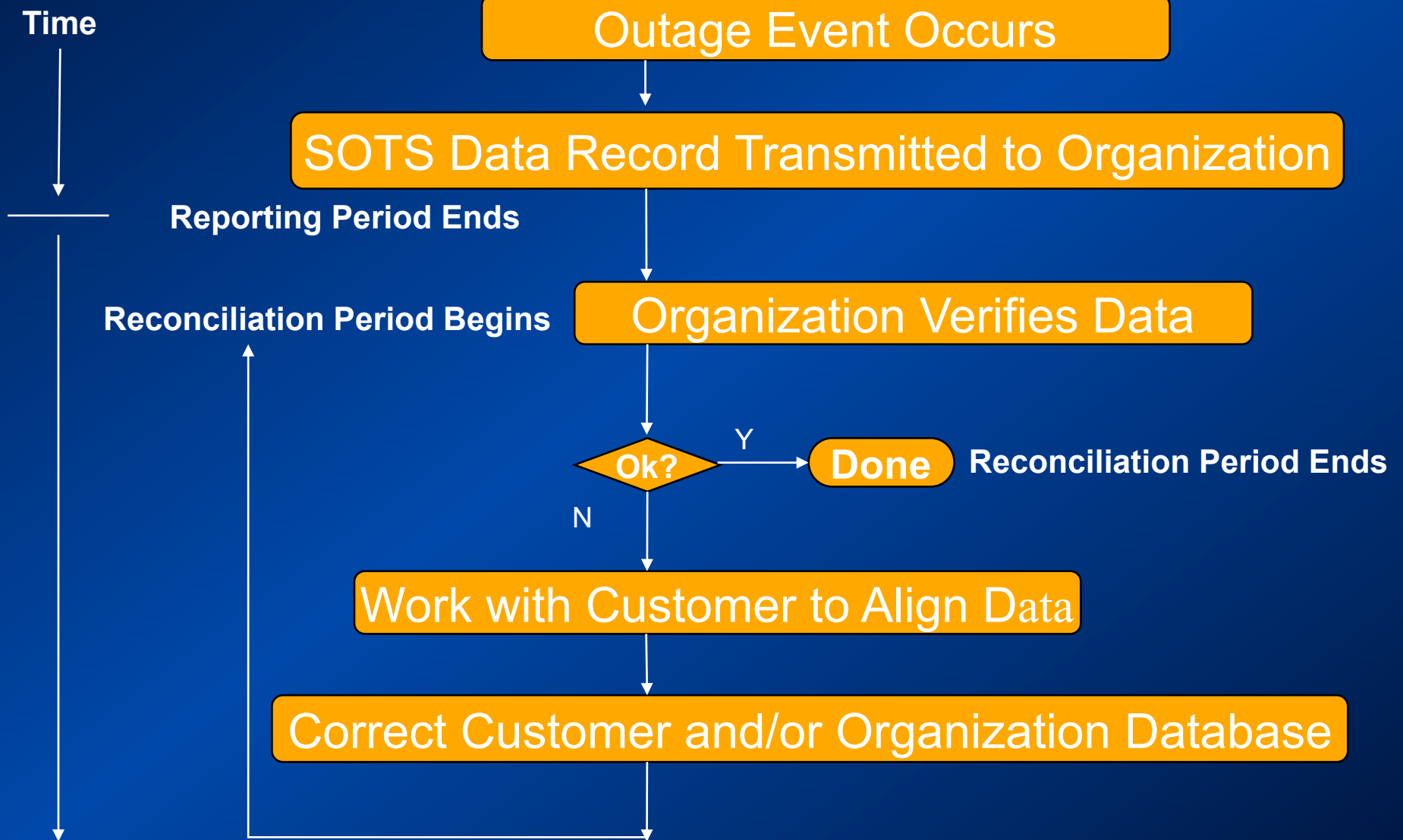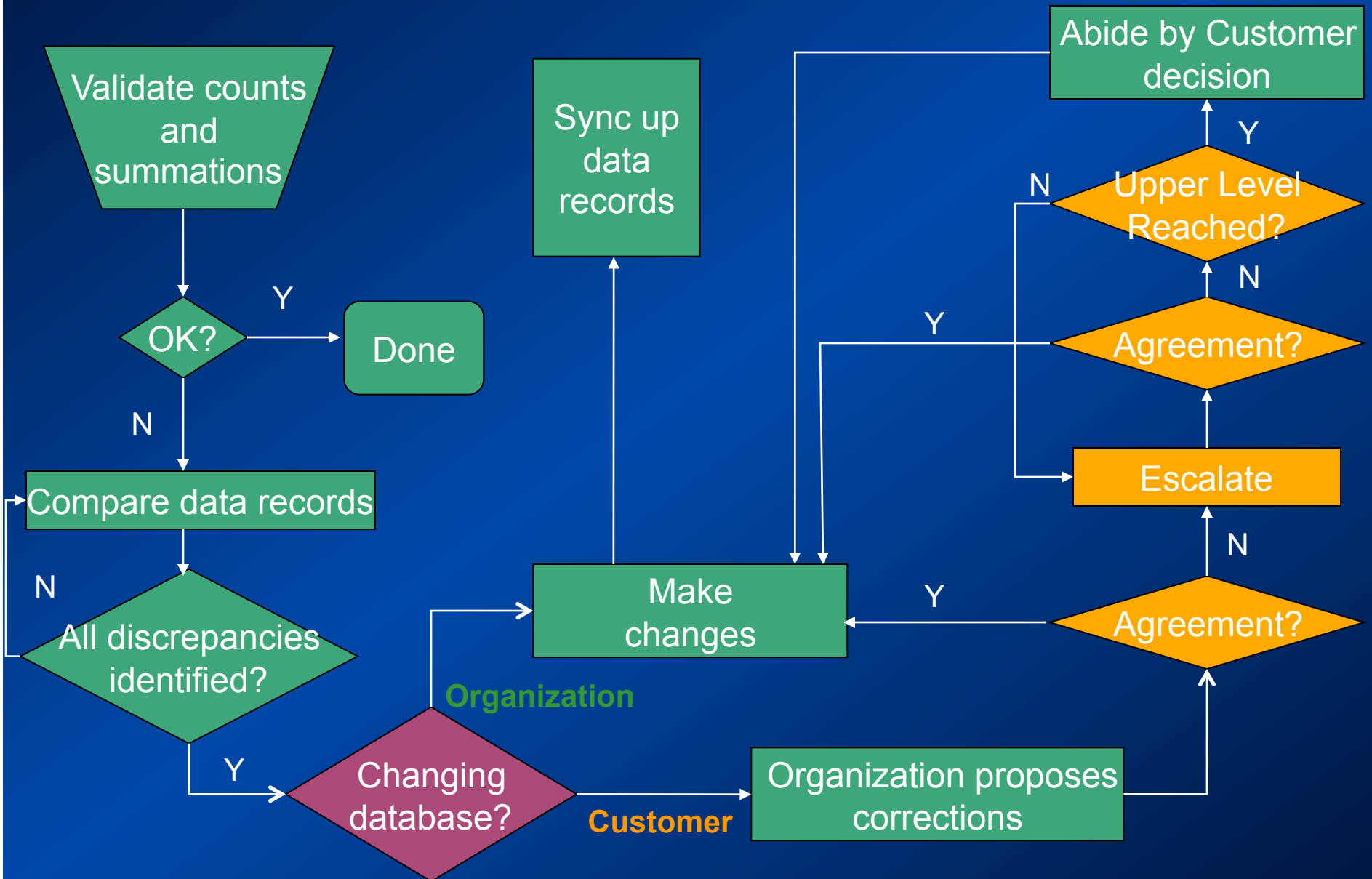
Sample CSV File

#,2,ABC,3/1/2007,456780,bkipping@att.com,1,False,

10000,New,Service Provider,,SNJOCA,

1/30/2007,USA,Kentucky,BEAVER DAM,,Kipping,Belle,

18007576700,bkipping@att.com,

1/26/2007,15:00:22,001:50:16.00,000:00:00,0,0:00,,0:00,Y,Manufacturer Name,XXX Series,NA,1.2.3,OC-48,NA,N,N,N,Y,

96,OC-1,HARDWARE FAILURE,Product,N,NA,On 1/19/07 during the turn-up of a Gig-E trunk the two ES Gig ports on the Beaver Dam XXX Series BVDMKYMA47W were found to be defective. As a result the entire switch had to be replaced. Customer replaced parts from stock and opened this case for tracking only.,Both es gig-e ports on the bvdmkyma47w XXX Series are defective.,Y,605205720

SOTS Timeline

Time

Outage Event Occurs

SOTS Data Record Transmitted to Organization

Reporting Period Ends

Reconciliation Period Begins

Organization Verifies Data

Ok? — Y → **Done** **Reconciliation Period Ends**

N

Work with Customer to Align Data

Correct Customer and/or Organization Database

Reconciliation Process

Validate counts and summations

OK? —Y→ Done

↓N

Compare data records

All discrepancies identified? —Y→ Changing database?

Organization ↑

Customer → Organization proposes corrections

Make changes

Sync up data records

Agreement? —Y→ Make changes

↓N

Escalate

↑N

Agreement? —Y→ Abide by Customer decision (Y)

Upper Level Reached? —N→ (back to Escalate)

N

Additional Information

http://tl9000.org/sots/overview.html

- ❑ Documentation (including checklist)
- ❑ Header Record Template
- ❑ SOTS v2 Data Record Template
- ❑ Generic SOTS Implementation Design Guide
- ❑ Frequently Asked Questions
- ❑ Administrative Report Template (Optional)

Questions or Contact

Use Contact Us on any page of

questforum.org

or

tl9000.org

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