FIRST CONSULTING CASE STUDY | TECHNICAL WRITING

Keeping a Network Management System Guide Current Across Four Releases

PART 1

The Engagement at a Glance

Executive Summary

A fiber-optic networking equipment supplier had launched a broadband access platform for service providers, built around a network management system (NMS) that operators use to deploy, configure, and monitor their networks. The software was developing quickly, with new releases on a regular cycle, and operators needed a single, reliable guide covering both everyday use and system administration.

First Consulting provided the technical writing team that produced the user and administration guide for the NMS. The team delivered the original guide and has since updated it three times, each time alongside a software release, so that every edition matches the software customers are running. Instead of treating documentation as a one-time deliverable, the engagement handled the guide as a maintained product with its own release cycle.

Four editions in sixteen months, each aligned with a software release, have kept the guide in step with the product and given the client a document set that grows with it.

Background and Context

The client

The client supplies fiber-optic networking equipment to telecommunications carriers, cable operators, and other network operators. It offers its access platform as a complete package, so customers can deploy fiber broadband without assembling it from several vendors.

The product

The platform delivers high-speed passive optical network (PON) service, the fiber technology used to bring broadband to homes and businesses. It is built on open hardware and lets operators carry residential, business, and wireless services over one fiber infrastructure, often reusing fiber already in the ground. The network management system is the operator’s window into all of it: the software used to bring equipment into service, set up subscriber services, and watch the health of the network.

Area	What the guide had to cover
Network equipment	The central office equipment (optical line terminals) and the customer premises units (optical network terminals) that the NMS manages
Deployment and provisioning	Bringing new equipment into service and setting up subscriber services
Monitoring	Network status, alarms, and performance information
System administration	Installing and maintaining the NMS, managing users and access, and keeping the system secure
Integration	How the platform works with operators' existing infrastructure and software systems

Scope of the guide.

Why the documentation mattered

Service providers choosing a new access platform are taking on software their staff have never used. The user and administration guide is how a network operations center learns the system, how administrators keep it running, and how the client's own support team answers questions. For a platform built on open hardware and competing against long-established suppliers, clear documentation is part of what makes the product credible to buyers.

- **Network reliability:** operators use the NMS to manage live broadband service, so a wrong procedure can take subscribers offline
- **Security:** administration content covers user accounts and access to network equipment, which operators expect to be described precisely
- **Customer onboarding:** the guide is a primary reference for operators bringing the platform into service

Scope of the engagement

- **Original guide:** research and writing of the complete user and administration guide for the NMS, delivered with the initial software release
- **Release updates:** three updates, each documenting the new and changed features in a software release
- **Review and revision:** incorporating engineering and product management review into each edition
- **Program oversight:** First Consulting management of schedule and quality

Constraints

- **Software still evolving:** the NMS was changing release by release, so the guide had to be structured to absorb change without rewriting it each time

- **Fixed release dates:** each update had to be ready when the corresponding software release reached customers
- **Engineering time:** the subject matter experts were the developers building the next release, so time with them was limited

Key Challenges

- **A new product to document:** the platform was newly on the market and much of what operators needed had never been written down outside the engineering team, so the writers had to learn the system and work out how it would be used
- **Two audiences in one guide:** operations staff and administrators need different material, and the guide had to serve both without burying either group in the other's content
- **Keeping up with releases:** each release changed screens, features, and tasks, and every change had to be documented everywhere it appeared by the time customers received the software
- **What was at stake:** outdated or unclear documentation leads to provisioning errors, avoidable support calls, and slower deployments, and affects how prospective customers judge the product

Documentation Objectives

The engagement had two goals: to produce a complete, accurate guide to the NMS, and to keep it accurate as the software evolved.

Accuracy objectives

- **Technically correct:** every procedure and setting checked against the software and confirmed with engineering
- **Complete coverage:** all user and administration functions of the NMS documented
- **Current with each release:** each edition matches the software version customers are running

Usability objectives

- **Task-based:** content organized around what operators and administrators need to do
- **Clear separation of audiences:** user and administration material easy to find for each reader
- **Consistent:** the same terminology, structure, and style in every edition

Program objectives

Objective	Measure	Target
Original guide	Complete guide delivered	With the initial software release
Release updates	Updates delivered with software releases	With each later software release
Schedule	Each edition ready when the release ships	Every release

Program objectives and targets.

Is This Relevant to You?

First Consulting's approach fits organizations facing any of the following:

- Software released on a regular cycle, with documentation that falls behind
- A management or administration interface for networking, communications, or other technical equipment
- A new product launch that needs a complete guide, followed by ongoing updates
- A documentation need that does not justify a full-time, in-house writing team

To discuss a software documentation or technical writing need, contact First Consulting.

> **Continue to Part 2 for the details.** Part 2 covers the challenges the engagement had to overcome, the team's approach and methodology (including how each edition was kept current), the results, lessons learned, and why this approach matters.

PART 2

Inside the Engagement

This part goes deeper into how the work was done: what made it difficult, how the team approached the guide, how each edition was kept current, and what the engagement delivered.

The Challenge

A network management system guide has to serve readers who know networking well but do not yet know this product, and it has to stay correct as the product changes. Both are hard; doing both on a fixed release schedule is harder.

Writing the first edition from a new product

When the original guide was written, the platform was newly on the market and much of what needed to be documented had not been written down anywhere outside the engineering team. The writers had to learn the system, work out how operators would actually use it, and turn that into procedures.

Two audiences in one guide

Network operations staff use the NMS day to day to provision service and respond to alarms. Administrators install and maintain the system itself and control who can do what. The guide had to serve both without burying either group in the other's material.

Keeping up with releases

A guide that describes the last release's screens is worse than no guide at all, because operators lose trust in it. Each software release changed screens, added features, and sometimes changed how existing tasks were done. Every change had to be found, documented, and reflected everywhere it appeared in the guide, by the time customers received the new software.

What was at stake

Outdated or unclear documentation leads to provisioning errors, avoidable support calls, and slower customer deployments. For a vendor competing against larger, established suppliers, it also affects how prospective customers judge the product.

Approach and Methodology

First Consulting approached the guide as a living document. The first edition was built so that later updates could be made section by section, and each update was planned around the software release it supported rather than started after the release was finished.

Team structure

Role	Focus
First Consulting technical writing team	Research, writing, revision, and document management
First Consulting management	Oversight, scheduling, and client communication
Client engineering and product team	Subject matter expertise, review, and approval

Team composition.

Building the original guide

Phase	Key activities
1. Onboarding	Learn the platform and the NMS; review specifications and existing material; agree on audiences and outline
2. Planning	Set the guide's structure, terminology, and style; schedule engineering reviews
3. Drafting	Write procedures from hands-on use of the NMS and interviews with engineers
4. Review and revision	Engineering and product reviews; track and incorporate comments
5. Release	Final edits against the released software; delivery with the initial release

Phases of the original guide.

A repeatable update cycle

Each update followed the same cycle, aligned with the software release it supported:

- **Identify changes:** review release plans, feature lists, and engineering notes to find every new or changed function
- **Verify in the software:** work through each change in the new build rather than relying on descriptions alone
- **Update in place:** revise affected sections and every cross-reference to them, keeping structure and terminology consistent
- **Review and publish:** engineering review of changed content, then release of the new edition with the software

Because each update started from the release plan rather than the finished release, the team knew which parts of the guide would change before the software was final.

Writing for two audiences

User content was organized around operational tasks such as provisioning service and handling alarms, and administration content around installing, maintaining, and securing the system, so each reader can go straight to the part of the guide written for them.

Governance and communication

First Consulting management oversaw the engagement and stayed in contact with the client on schedule and priorities for each edition.

Results

Editions delivered

Edition	Timing	Purpose
Original	Initial release	Complete user and administration guide for the NMS
Update 1	Month 4	New and changed features in the second software release
Update 2	Month 10	New and changed features in the third software release
Update 3	Month 16	New and changed features in the fourth software release

Editions of the guide, each delivered with its software release.

Impact

Customers have had a guide that matches their software at every release since the NMS documentation was first published. The client has a document set structured for maintenance that can continue to grow with the product.

Lessons Learned

What worked

- **Designing for maintenance:** structuring the first edition so it could be updated section by section made each later update more efficient
- **Planning from the release plan:** starting each update before the software was final kept the guide on the same schedule as the product
- **Verifying in the software:** working through every change in the actual build, rather than relying on descriptions, kept the guide accurate

What is reusable

The update cycle, the guide's structure, and its terminology carry forward to every future release of the NMS and can be applied to other products in the client's line.

Why It Matters

Software documentation is often written once, at launch, and then falls behind as the product changes. For network operators running live service, an out-of-date guide is a real cost. This engagement shows a different model: documentation treated as part of the product, updated on the same cycle as the software, by a team that knows the product and the readers.

What this demonstrates

- **Documentation as a maintained product:** a guide kept current through four editions in sixteen months
- **Release-aligned delivery:** each edition ready when the software reached customers
- **Complex technical subject matter:** user and administration documentation for carrier-grade network management software
- **Two audiences, one guide:** content organized for both operations staff and system administrators