

# Repair-Remanufacture

- **Developed Business Model and Implementation Plan.**
- **Built the “Needs Model” with Customer’s**
- **Developed Unique “Industry First”-Services**
- **On-line Tracking Portal “Industry First”**
- **Developed 26,000 sq. ft. facility in Tijuana MX for Product Repair, Refurbishment, Upgrade and New Product Production Automated and Manual.**
- **Developed International Shipping model to minimize worldwide shipping- North America, Europe, South America and Australia.**

onsolidated  
Repair  
Group

# Consolidated Repair Group Presentation Overview

- **Broadband Industry Equipment Issues**
- **Company Overview**
- **Services**
- **Unique Features**
- **Facility Tour**
- **Cost Comparison**
- **Summary**
- **Next Steps**

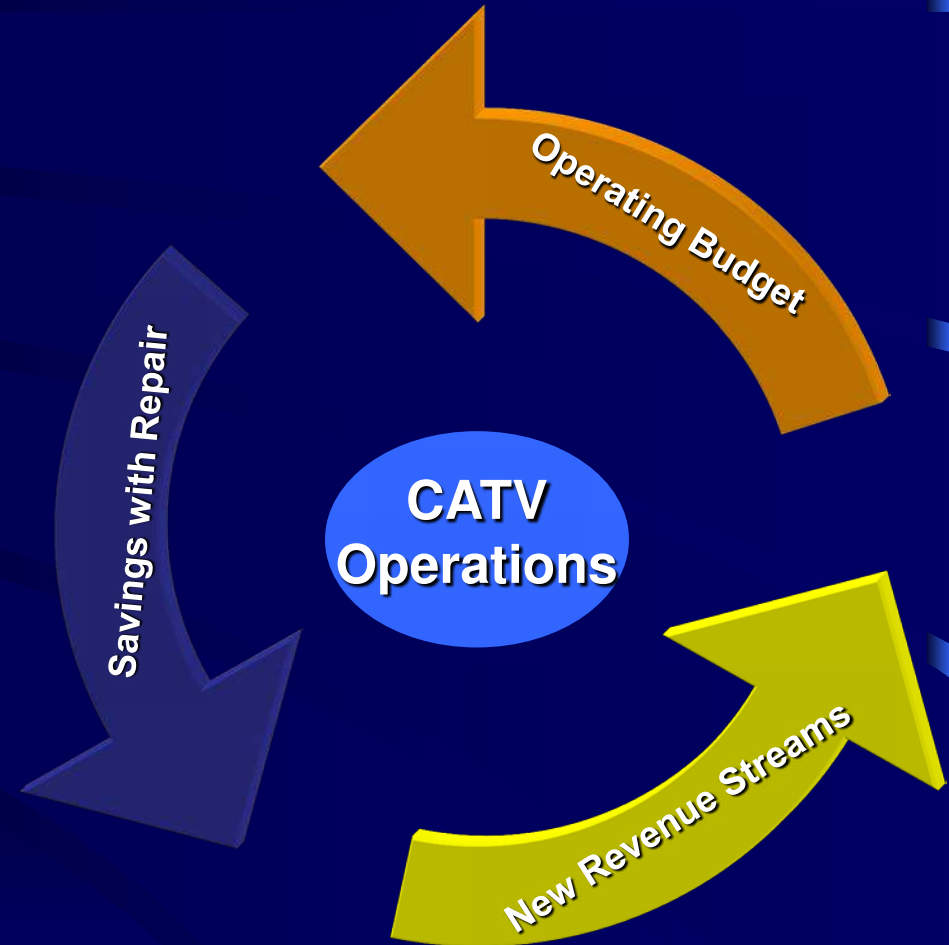
# Broadband Industry Equipment Issues

## ➤ Product Warranty

- After Years of Construction large number of OEM warranties have expired or are near term

## ➤ Capital Budgets

- Business climate dictates economical alternatives
- Cost of new revenue streams implementation
- Pressure to accomplish more with less working capital



# What is the Consolidated Repair Group?

- **CRG is a division of Mainline, Inc.**
  - **20 Years of CATV experience**
    - **Manufacturing**
      - Modules
      - Plug-ins
    - **Distribution**
    - **Engineering**
      - custom components
    - **Repair**
    - **Refurbishment**



# Changing Business Environment Requires New Solutions

## ➤ **CRG Business Model**

- **Economical repair services for CATV operators and OEM companies**
- **Dedicated support staff**
- **Multiple avenues of interaction**
  - **Web based**
  - **Phone - (888)**
- **Deliver enhanced value added services**
  - **Reports**



# Consolidated Repair Group Focused Operations

**Delivering high quality repair and  
product re-manufacturing services  
to the broadband industry**

# Consolidated Repair Group Service Offerings

- **Repair/Remanufacture**
  - **Headend Signal Generation**
  - **Headend Fiber Optics**
  - **Field Fiber Optics**
  - **RF Active Devices**
  - **RF Passive Devices**
  - **Field Test Equipment**



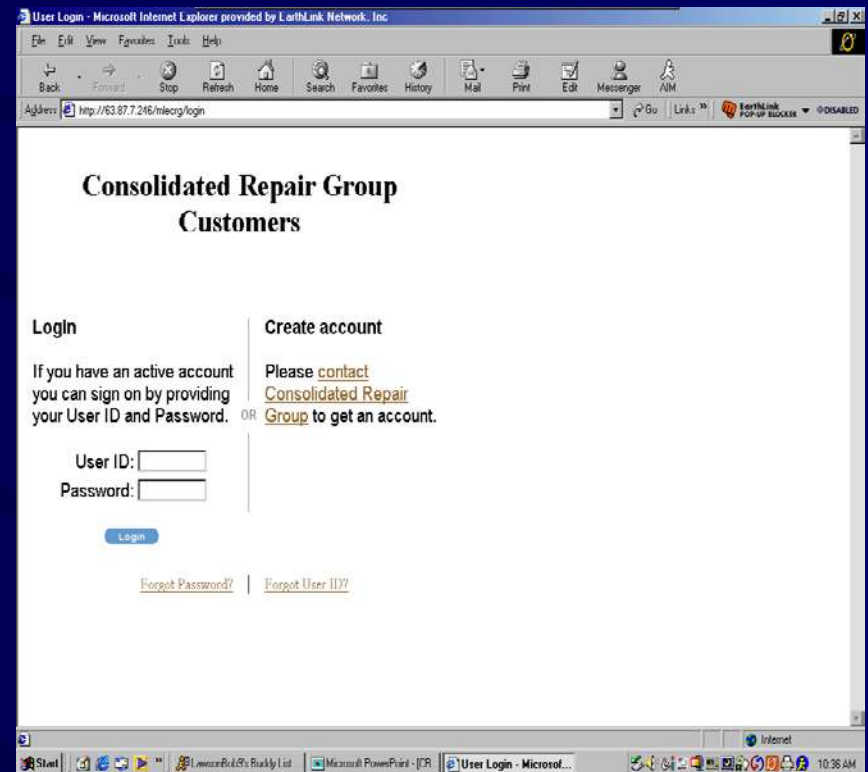
# Highlights of CRG Web Interaction

## ➤ Web Portal (current)

- Automatic Repair Authorization
- Track status of products
- Hierarchy Access

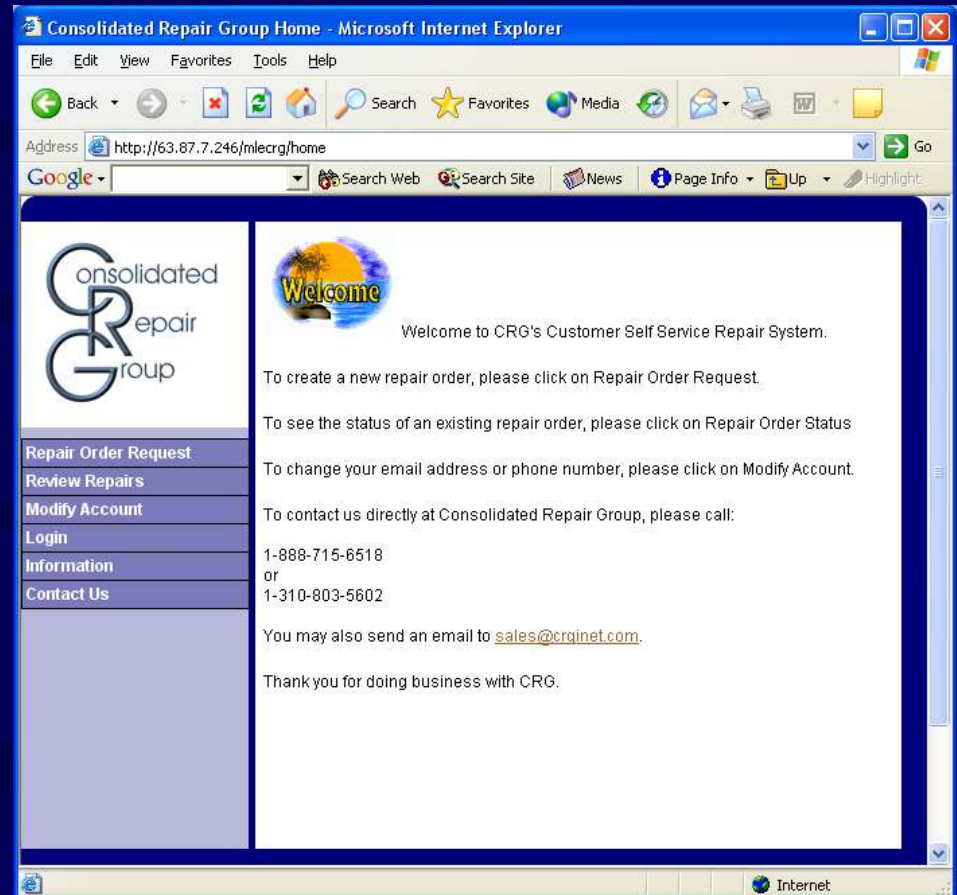
## ➤ Web Portal (Q4 - 03)

- On-line repair documentation
- Trend analysis data report generation
- Other Reports -
- TBD by customers



# Main Menu

- Sign in
  - Receive password
  - Use existing password
- Order tracking
  - System , region, corporate
- Report generation
  - Metrics
  - Unit analysis
  - \$'s by week month years
  - Custom reports available.



# Highlights of CRG Warranty

- **All repaired equipment has a 2 year standard warranty for the parts replaced**
  - **If components replaced by us fail within that time period due to normal operation, CRG will repair for free and give customer a material credit equal to the original repair charge.**
- **We further warrant that all equipment will meet or exceed OEM specification upon return to service!**

# Unique Customer Services

## ➤ Dedicated Support Staff

- Not selling other products/services
- Single point of contact for all levels of your organization
- Available to answer questions
- Can implement return through web or manually for you if needed

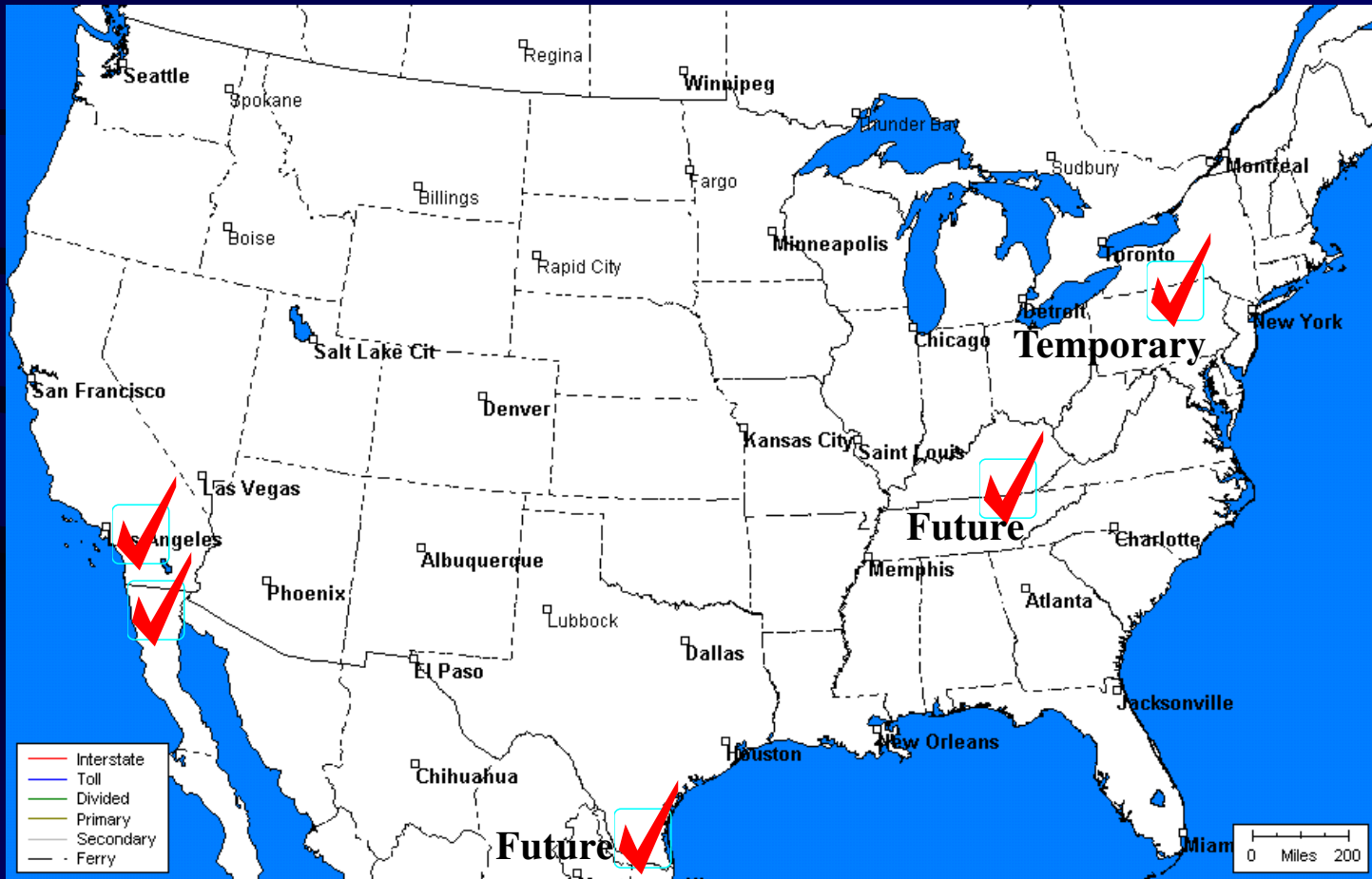


# Uniquely Qualified Technical Staff

- **Repair Supervisors**
  - Industry Experienced
  - Manufacturer Training
    - initial and Ongoing
  - Technical Degree/Cert.
- **Repair Technicians**
  - Manufacturer Training
    - initial and Ongoing
  - Technical Degree/Cert.



# Repair Facility Locations



# AM Fiber Optic Repair Station

- Software automated test process
- Manufacturer qualified test procedures
- ESD workstation
- Late model test equipment
- Clean environment



# RF Amplifier Station Repair

- **Software automated test process**
- **Software assisted fault isolation**
- **Manufacturer qualified test procedures**
- **ESD workstation**





# Shipping and Receiving

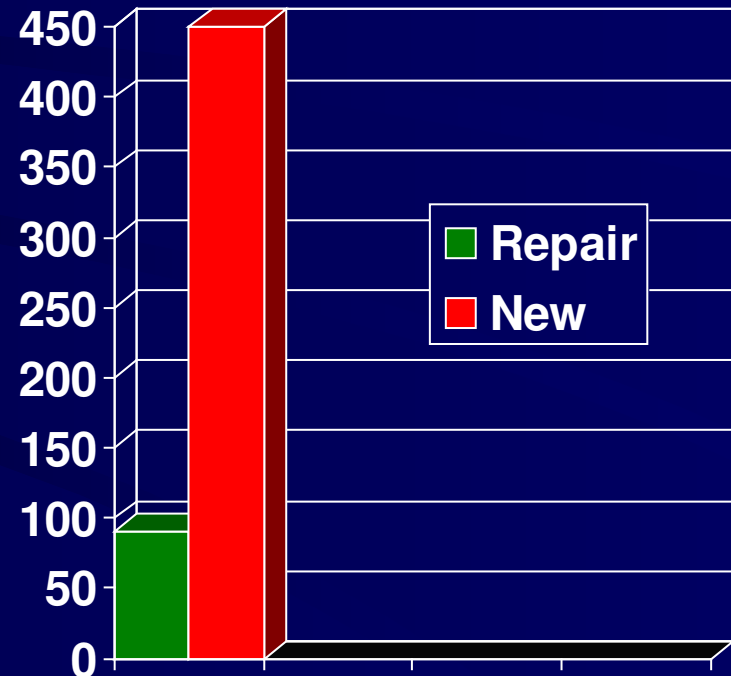
- **Linked to software system**
  - **Assigns product bar coding for tracking**
  - **Initial point where customer tracking begins**
  - **Assigns shipping information**



# Why Repair? Cost Comparison - Distribution Amplifier

## ➤ Economics

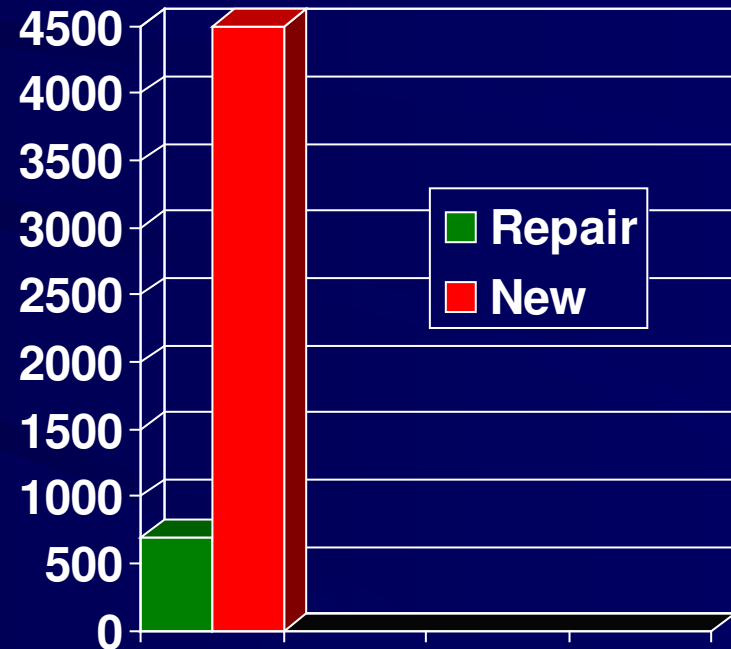
- Repair of unit is 79% less than cost to replace with new
- Provides lower cost of ownership
- Facilitates potential regular PMCS on equipment to ensure reliability
- Maintains proper operating parameters and specifications



# Why Repair? Cost Comparison - Optical Transmitter

## ➤ Economics

- Repair of unit can be 80% less than cost to replace with new
- Provides lower cost of ownership
- Can offset cost of new transmitters as you implement new revenue services.



# Summary

## ➤ **CRG Provides**

- **Authorized repair of C-COR products**
- **Services modeled after OEM procedures**
- **2 year warranty on parts**
- **Value Added Services**
  - **True web access**
  - **Reporting functions**
- **Dedicated customer service**
- **A business partner relationship**
- **Economical repair of products**