



# Fisheries GIT

## Update on EBFM governance network study by VASG and MDSG

**Overview of network analysis**

**Examples**

**Status of the EBFM study**

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# Overview

## Network Analysis – Nodes and Links

- Social Network Analysis
- Communication Network Analysis
- Graph Theory algorithms—spatially arranges nodes.
- Software—graphically maps nodes and links
- Quantitative measures of map's structure and function
  - Density—group cohesion, trust, consistent behavior
  - Path length—disparate sub-groups, far apart
  - Centrality measures—bridgers, info disseminators, “the pulse”

Growing application in public policy and management

# Overview

## Governance Networks

- Example of adaptive behavior—on-the-ground implementation reality
- Non-hierarchal, emergent
- Varying degrees of formality

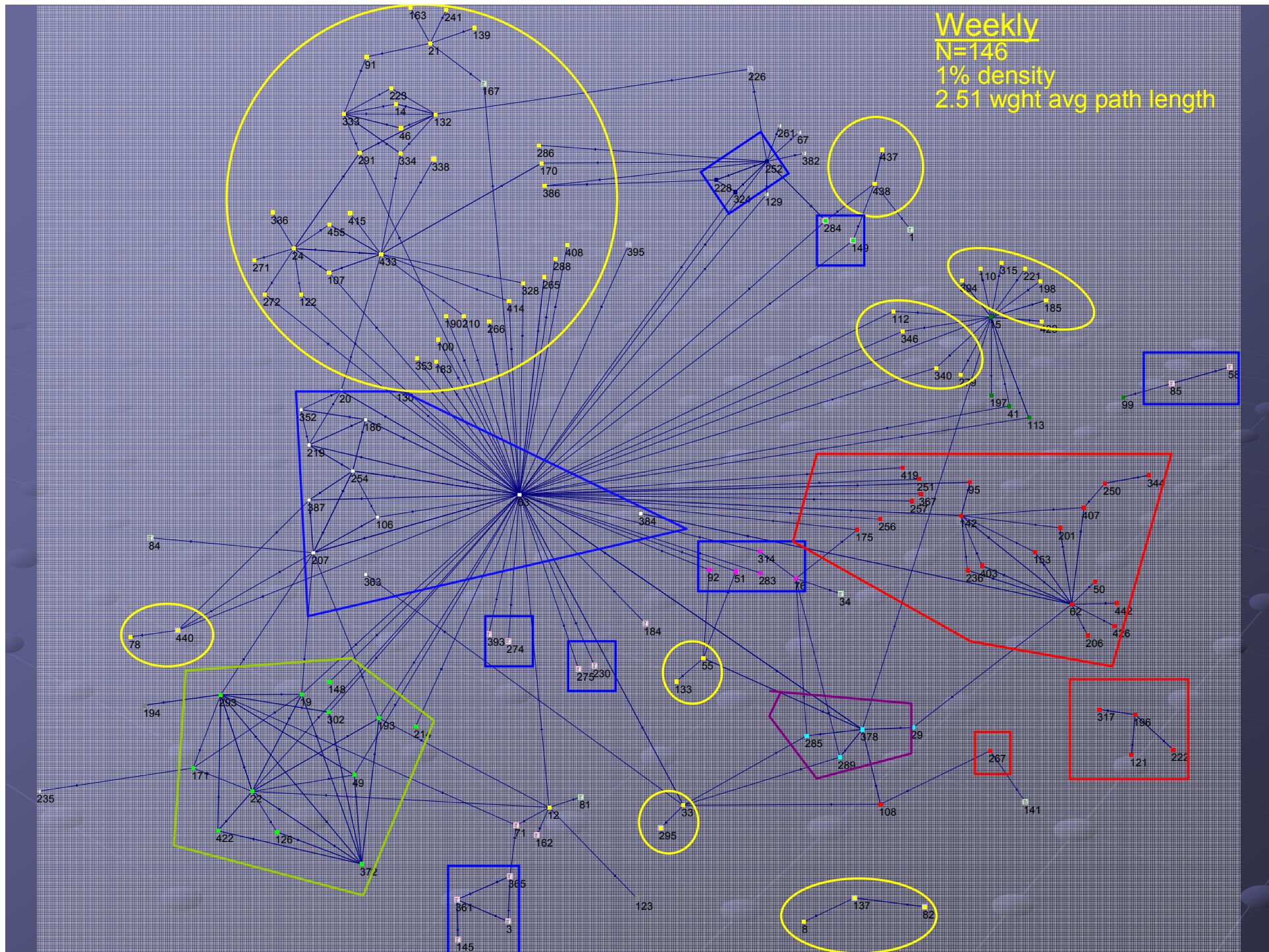
## Early research on contractor

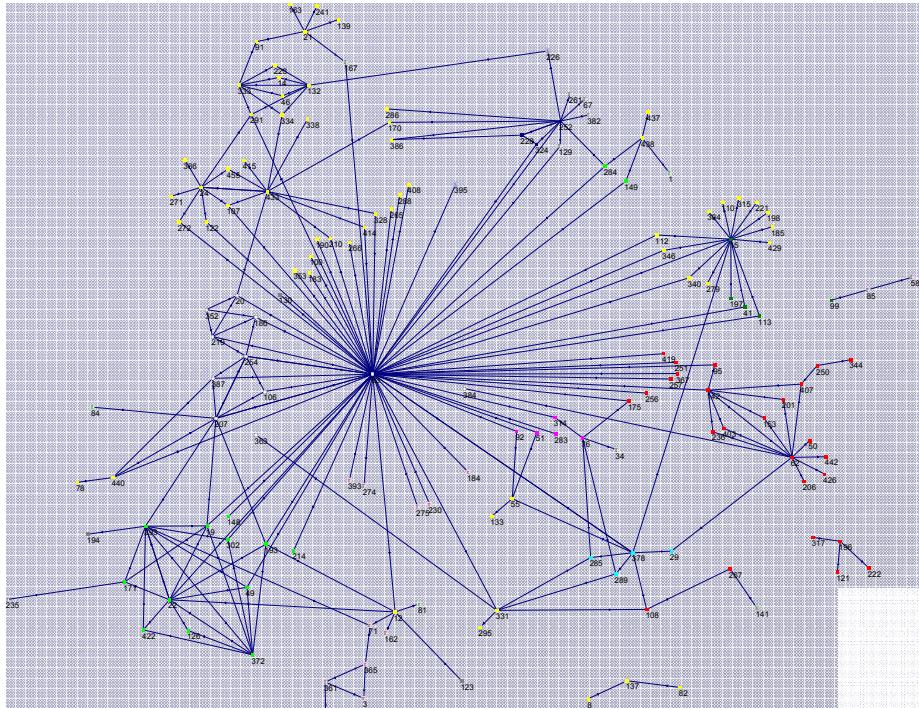
## Recent research on multi-sector, multi-stakeholder, multi-jurisdictional cases

# Examples

## What can we do with communication network analysis

- Atlantic Herring FMP
  - Science-to-management
  - Stakeholder engagement patterns
  - Network resiliency
- NH Commercial Fishing Industry
  - Targeted outreach
- Watershed management—Fisheries management
  - Integrated management potential
- EBFM governance network
  - Local-state-federal links
  - Network performance





5 Groups from 1 of  $N=146$

Weekly – remove hi betweeness

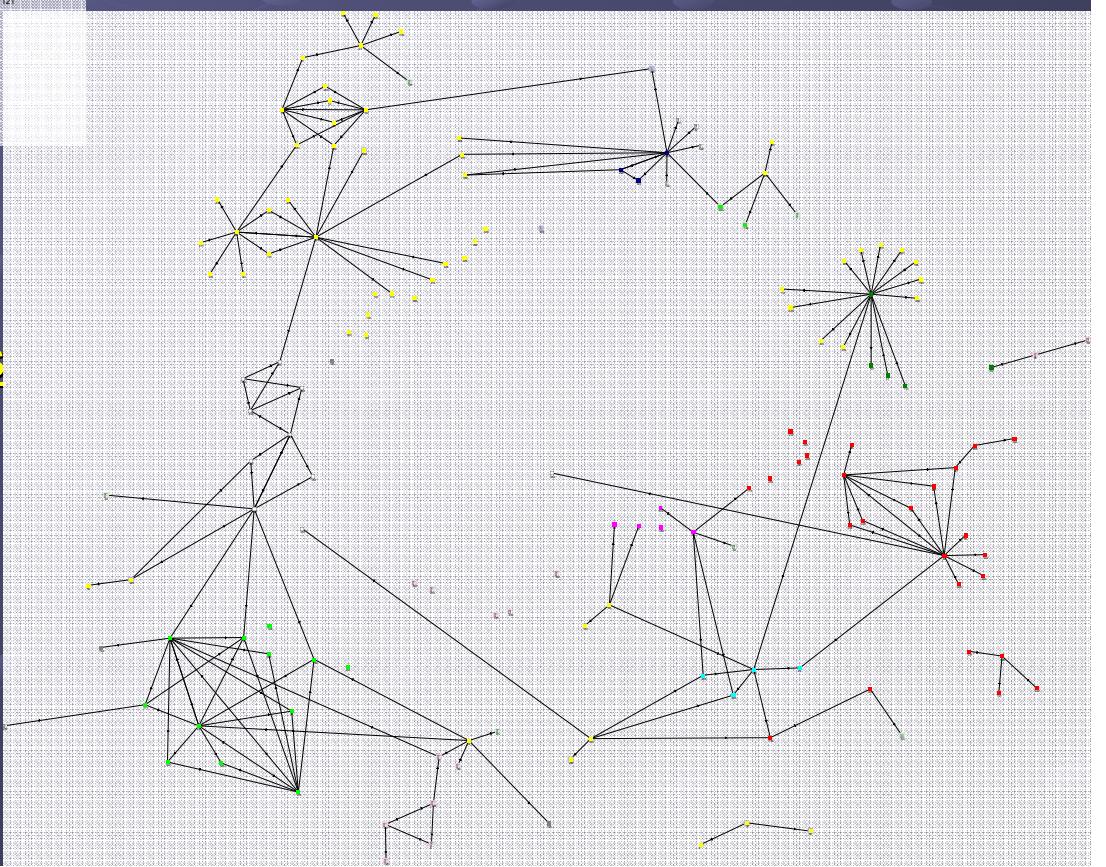
$N=74$

2.04 wght avg path length

$N=48$

1.21 wght avg path length

# Resiliency



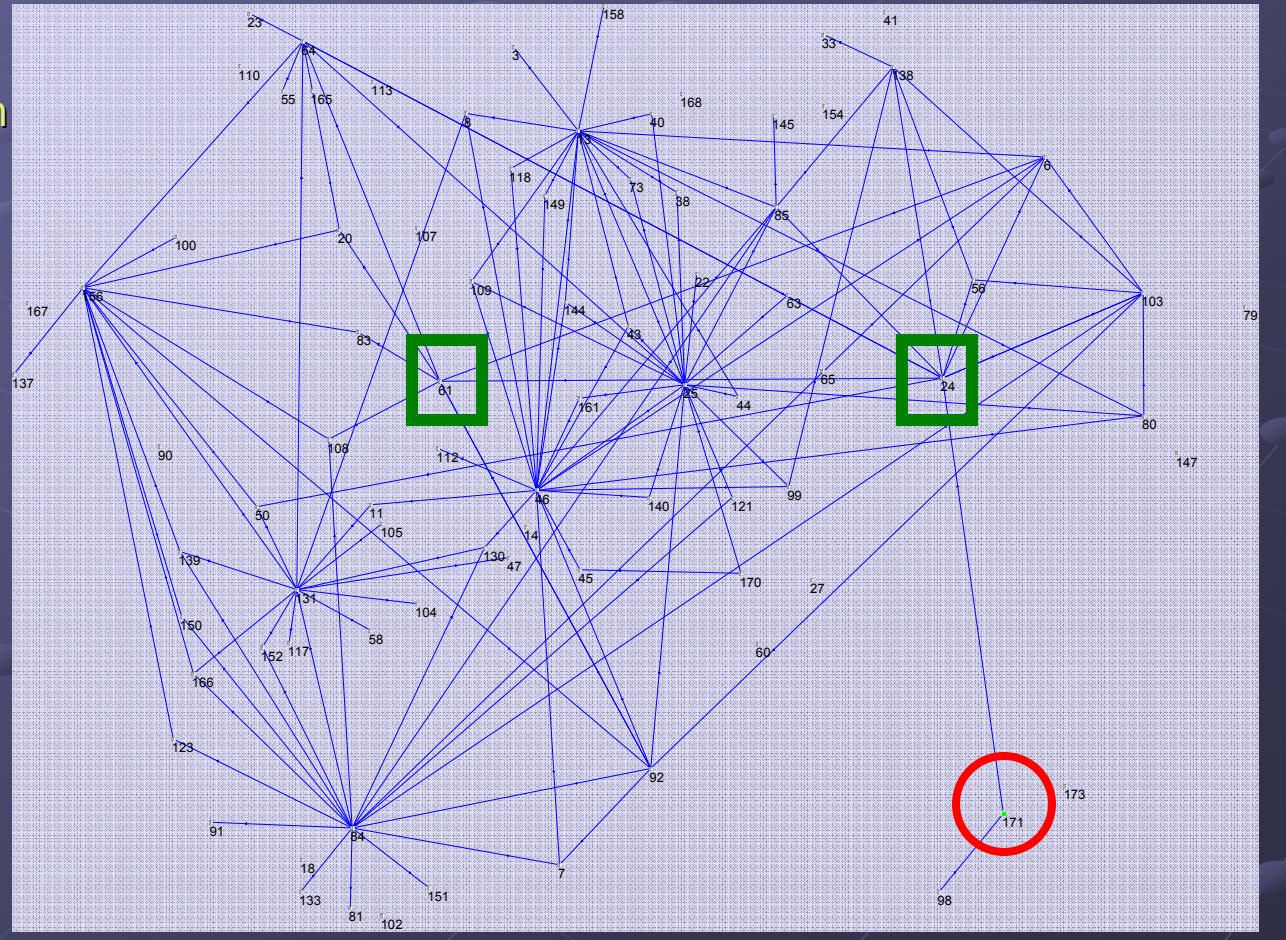
# Example: NH Commercial Fishing Industry

## Weekly communication

66 members

3% density

2.02 average path length



# EBFM Gov Net Study

## Socioeconomic QET—Governance Network Study

- Regulatory landscape—baseline
  - Multi-jurisdictional
  - Local-state-regional-federal parties
- National Sea Grant Law Center
- Research Team
  - Political scientist, Law professor, policy interns
- Network performance measures
  - EBFM participants
  - Two “cases”—critical places in the Bay

# EBFM Gov Net Study

## EBFM Governance Network Study—achieved

- Two summer interns
  - Jessica Eckerlin
  - Jennifer Reichle
- Preliminary study of the EBFM participants
  - Data analysis
- Prioritized two geographic cases
  - Accomack County VA—Somerset County MD
  - Cecil and Kent Counties MD—New Castle County DE
- Compiling sample and site visit
  - Refining questionnaire and administration protocols
  - Key informant interviews

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# EBFM Gov Net Study

## EBFM Governance Network Study—forthcoming

- Interns
  - Jessica Eckerlin
- Research Team review of instrument
  - Network measures
  - Performance measures
- Survey the five counties
  - Data collection and analysis
- End: January 31, 2011

# EBFM Gov Net Study

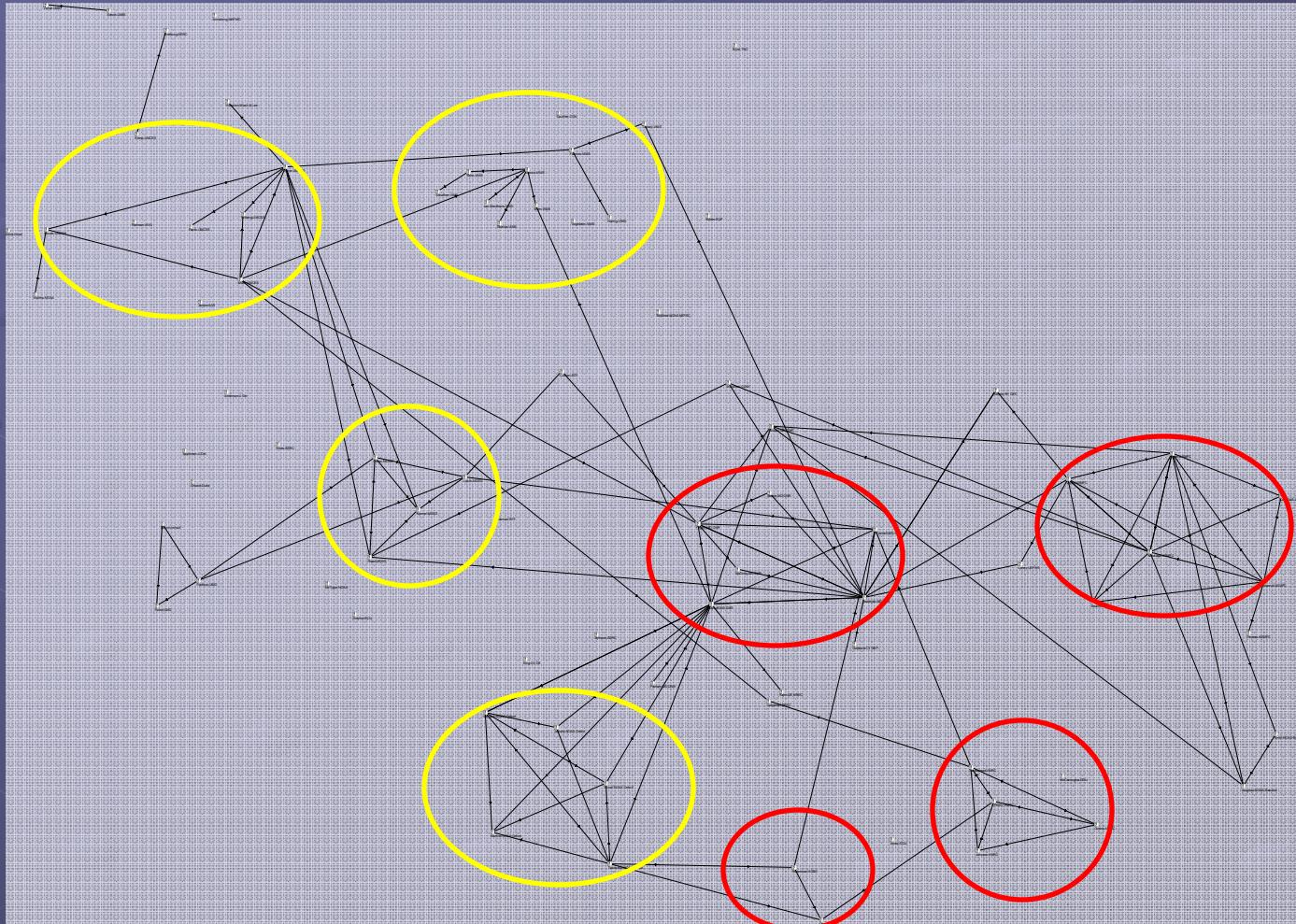
## EBFM Governance Network Study

Weekly:

58N

4% Density

3.13 Wght Avg Pathlength



# THANK YOU!

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