Crew Data Collection Requirements and Feasibility Results

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System Options Studied

Project definition specified 3 options to study

- Landing Report Capture
- Vessel Operator Report
- Logbook

Information and Requirements Gathering

- Structured Interviews
  - Data Consumers – users of the data
  - Data Providers – Vessel operators and crew members
  - Data Reporters – seafood processors
  - Enforcement
- Team meetings
  - System Administrators
    - » CFEC Permit Licensing system
    - » ADF&G Licensing system
    - » eLandings system
    - » ADF&G Commercial Fisheries IT
- 91 individuals provided input

Requirements Definition

- Gathered information needs, capabilities, and constraints
- Determined interfacing system requirements and constraints
- Created Requirements definition documents using IEEE/ANSI Standard for Software Requirements Specification
- Received feedback from agency staff and reviewers, and incorporated into documents

Estimated Development Costs

- Analysis team members made independent development estimates based on requirements documents
- Analysis team applied estimates to system components and subsystems

Estimated Operational Costs

- Developed operational cost estimates for each system option
- Estimating factors:
  - Transaction volumes for each system option
  - Number of users for each system option
  - Current system support experience of eLandings system
  - Infrastructure needed
  - Data verification efforts on existing eLandings system
  - Unique system option features

Feasibility Assessment
Significant Challenges

- Crew License Number validation
- Reporting compliance
- Reporting Accuracy
- Data Reporter Interests

Feasibility Challenges
Landing Report Capture

- Least development costs, but highest support costs, highest transaction rate
- Most subject to crew license validation issue due to real time nature of data capture
- Subject to systemic non-compliance in some fast paced fisheries
- Greatest data entry burden
- Involves extra class of users

Feasibility Challenges
Vessel Operator Report

- High development costs
- Relatively high support costs
- New infrastructure required for IVR
  - IVR not popular with users
  - IVR complexity exceeds rules of thumb
- Crew license validation still an issue
- Prompting for reporting required

Feasibility Challenges
Logbook

- High development costs
- Support costs lower due to shortened reporting period and lower number of transactions
- Crew license validation issue mitigated
- Paper logbook required
- Prompting for reporting required

Conclusions

- Significant risk in all options
  - Higher than for similar sized systems
  - Data quality, user acceptance, support
- Data quality a significant issue
  - Ability to validate crew license numbers a major drawback on two of the options
  - Verification of data may require significant effort
  - Crew review input uncertain

Recommendations

- Go forward cautiously
- Of the studied options:
  - **Logbook**
  - Consider piloting with paper logbook only to reduce development costs
- Consider other options, implement experimentally as proof of concept

Questions/Comments?