

Crew Data Collection Requirements and Feasibility Results

Alaska Department of Fish
and Game

And

Wostmann & Associates, Inc.



WOSTMANN & ASSOCIATES, INC.

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?



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