FISHERIES AND OCEANS CANADA

Technical Committee for the Development of a DFO Standard on Electronic Logbook Software

DRAFT MINUTES OF THE 1st meeting
July 14-16, 2015

PREPARED BY:
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Committee Secretary

REVIEWED BY:
Lisa Robichaud on behalf of
Brent Napier, DFO
Committee Chairperson

Membership

Organization	Contact	Interest	Region	Participation
Fisheries and Oceans Canada	Brent Napier	Regulator	NCR	Chair
Fisheries and Oceans Canada	Jean-François LaRue	Regulator	NCR	Opening Remarks
Fisheries and Oceans Canada	Lisa Robichaud	Regulator	NCR	In person
Fisheries and Oceans Canada	Cédric Arseneau	Regulator	Quebec	In person
Fisheries and Oceans Canada	Justin Mundy	Regulator	Pacific	In person
Fisheries and Oceans Canada	Glenn MacKay	Regulator	Maritimes	In person
Fisheries and Oceans Canada	Gaëlle Lemay	Regulator	Gulf	In person
Fisheries and Oceans Canada	Gaétan Gauthier	Regulator	Quebec	In person
Fisheries and Oceans Canada	Natasha Barbour	Regulator	Newfoundland and Labrador	In person
OLRAC SPS International	Amos Barkai	Software	International	In person
Joubeh Tech	Adam Myles	Software	Maritimes	In person
Regroupement des Pêcheurs du sud de la Gaspésie	Jean Coté	Fisheries	Quebec	In person
ROM Communications	Michael DeGroot	Software	Pacific	In person
Trackwell	Steingrimur Gunnarsson	Software	International	In person
Fédération Régionale Acadienne des Pêcheurs Professionnels	Jean Lanteigne	Fisheries	Gulf	In person
PEI Fishers Association	Melanie Giffin	Fisheries	Maritimes	In person
Canadian General Standards Board	James Richards	Certification	NCR	In person
Canadian General Standards Board	Monique Grabowski	Secretary	NCR	Teleconference
Gulf NS Fishermen's Coalition	Leonard Leblanc	Fisheries	Gulf	In person
Atlantic Policy Congress of First Nations Chiefs Secretariat	Amy Moulton	Fisheries	Maritimes	In person
Fisheries and Oceans Canada	Jane Wyrzkowski	Regulator	Pacific	Teleconference
Fisheries and Oceans Canada	Beth Hiltz	Regulator	Maritimes	Teleconference
IQMI & Inland Ground Fisherie Trawlers*	Jesse Latham	Fisheries	Pacific	Teleconference
Sizeable Funding inc	John Blyth	Software Developer		Teleconference
M. C. Wright and Associated Ltd	Michael Wright	Software	Pacific	Teleconference
M. C. Wright and Associated Ltd	Collin Thommasen	Software	Pacific	Teleconference
FFAW-Unifor	Jason Spingle	Fisheries	Newfoundland	Teleconference

Organization	Contact	Interest	Region	Participation
			and Labrador	
Chris Weeks	Thinking Big Technologies	Software	Maritimes	Teleconference
FFAW-Unifor	Keith Sullivan	Fisheries	Newfoundland and Labrador	Regrets
Sea Trackers Dockside Monitoring	Ricky Doyle	Fisheries	Maritimes	Regrets
SASCO INC	Chuck Ashbaugh	Software	International	Teleconference
En d'autre mots	Valier Santerre	Interpreter	Quebec	In person
Canadian General Standards Board	Mark Schuessler	Secretary	NCR	In person

1. Word of welcome; Opening Remarks

The meeting began at 9:00 am (EDT) with the Chair, Brent Napier of Fisheries and Oceans Canada (DFO) welcoming participants to the meeting and on the teleconference. He introduced himself as the Chief of Enforcement Programs of Fisheries and Oceans Conservation and Protection Directorate. He thanked all the participants, including those that travelled significant distances to be here.

The Chair thanked the simultaneous interpretation of Valier Santerre of En d'autres mots Inc. He noted that as Mr Santerre is doing this alone, they will take a few breaks during the meeting.

The Chair noted that this meeting was to advance the Electronic Logs Book project (e-logs). This would entail reviewing technical content of what should and should not be in the e-logs client software so comments should be restricted to the agenda items, in order to advance the work of this project. He acknowledged many issues are linked to this project, including costs, what fisheries are included and time for development, though this technical committee isn't in a position to address these items.

The Chair invited participants to introduce themselves by stating their name and organizational affiliation and a short background of their work.

It was noted to use the WebEx to write out questions on the teleconference for the benefit of reading them allowed for interpretation.

The Chair introduced Jean-François LaRue, Director General of Licensing and Planning Directorate of Fisheries and Oceans and invited him to give opening remarks.

Jean-François LaRue spoke about the importance of this meeting and how the e-logs project should help the fishing industry and DFO to modernize how the information collected. He spoke about DFO going through a recent round of funding cuts when it was identified that the collection of fisheries data is currently very expensive. The Minister has noted that the e-logs project will be of significant benefit to reducing costs of the Department while improving services and benefits for all stakeholders.
He noted that the goal will be the finalization of the technical content of this DFO Standard, to support development of the best tools at the lowest cost, without reinventing systems. He looks forward to everyone contributing to the final product.

Jean-François LaRue noted this is essential to the future of the fisheries. This is not to give new or more prescriptive orders to the fishers, but with the help of participants, there will be a streamlining of data collection. He noted that some fisheries may be ready to go ahead now, and the first wave of implementation may incorporate these or other fisheries. There are six regional databases now and they must be merged into a single, national database. E-logs may also have certification process for the software to ensure the integrity of the information. This may not solve all the issues in the data collection for fisheries but it

should be a good step forward. It was noted that mid-July was not the best time to have a meeting, however this meeting is not the final step of consultation or development. There will be a need to advance the standard, have further consultations and involve more stakeholders.

It was noted that there have been other examples of software systems that DFO has learned valuable information from, including National Online Licensing System (NOLS).
DFO has the challenge of 100 applications that must be updated as they no longer meet Shared Services Canada (SSC) requirements for application security, and cannot be migrated into a new platform. This new national approach to systems includes rationalization of what information needs to be collected and which programs must be maintained. This was required for all departments, including DFO. So a national database will be a requirement going forward.

DFO will require that the format of data will be restricted and meet SSC requirements for security and information storage.

Jean-François LaRue wished everyone luck with this meeting and the standard. He opened the floor for questions.

It was requested that it be put in the meeting minutes that DFO is on record saying that extensive consultations for the industry would occur on e-logs implementation. It was agreed that this committee is only one step of many for the development of the e-logs project. This committee is tasked to determine the standard, as per the terms of reference, but more consultation on other steps and what fisheries would be impacted are still to come.

Jean Lanteigne noted that he appreciated the comments of the Director-General and that the major issue of this program will be cost for fishers. He noted that the government imposes these expenses on the fishing industry, and it was like "shopping with a credit card of fishermen". He noted there are some applications that do not have any costs to fishers, and they should start with a no-net cost approach. The costs to fishers today are very high and so the costs of e-logs will be the key for this project.

This point want also countered with discussion on other world-wide jurisdictions and the best practices learned that could be suitable for Canada. It was noted that 'free apps' don't always work as fishers don't necessarily get information they need. It was noted that there can't be a huge cost to governments, so there must be a balance in the system of subsidies by governments to fishers, like deductions from levies or licenses for those that implement e-logs. It was noted that the paper system is expensive and not responsive to needs of both government and fishers.

It was noted that cost is very important and that the affordability and cost-effectiveness to fishers is a major principle.

The committee took a 10 minute break.

2. Review and acceptance of the agenda

The Chair presented the proposed agenda sent to participants on July 7th 2015. The agenda was approved and accepted by the participants without changes. (**Annex 1**)

3. Review and acceptance of the minutes of the Teleconference of June 25

The Chair presented the draft minutes of the Teleconference of June 25th, 2015. With a few minor changes to the participants and sectors they represent, there were no major changes and the minutes were accepted, as revised (**Annex 2**).

4. Review and acceptance of the minutes Terms of Reference of the Technical Committee

Cédric Arseneau presented the draft Terms of Reference of the Technical Committee. He gave the highlights of the document including the objectives of the Technical Committee to solve technical issues and questions. He noted the importance of transparency, and circulation of all comments and discussions to the Technical Committee. There would be a lot of emails distributed to members and while the schedule is 'optimistic' , `DFO is hopeful for the work to advance as scheduled. There were no questions and no changes suggested so the Terms of Reference for the Technical Committee were accepted. (**Annex 3**)

5. Review of the draft DFO Standard (Part 1)

The Chair presented the review of the version 1 of the standard. He noted the principles and introduction of the standard. He noted that there would be a version 2 coming in August and a version 3 of the document if needed in September.
Cédric Arseneau noted this Standard is anticipated to be used to help certify the software and to enable the assessment of the software.

There was discussion about the collection of data under Section 61 of the *Fisheries Act*. It was noted that the standard will adjust over time - new fleets and new systems evolving would be captured into the document.

It was noted that while Section 61 requires information to be kept on the fisheries, DFO uses e-logs for other information as well.
It was noted that there are mandatory parts to the standard and there are non-mandatory parts listed as a "nice to have". It was noted that is it useful to have the information to go back to the harvester too, for example to know when there is a "glut in the market". It was noted that the information must be a benefit to the harvester.

There was discussion that the electronic systems make the information 'more real-time' which can be helpful to inform everyone. There was discussion about the information needs of the fishers, and how the data will be used and by whom for example "science" people. There was discussion about the security and confidentiality of the data. It was noted that this project would not have new sharing arrangements. The context of the paper and e-logs will be the same.

There was discussion about the data input and output as separate entities. There was not a requirement to provide all the data collected by fishers to DFO but some may be good for the fishers too. It was noted that they security of the data with encryption is far better than with paper logs. It was noted that the format of the data is important but also the credibility of the process of collection and transmission and storage.
It was noted that the storage of the data would be a single database over 6 regional databases. The access to the storage of the e-logs data would be the same as data collected through paper logs.

There was a question about the last sentence of the introduction – it was suggested that it be modified to allow for future changes, as required.

There was discussion about what is compulsory, what is useful information as this relates to cost for the software and the transmission of data. There was a discussion about a 'lite' version of the software doing the mandatory items, but a full version doing more for fishers. There was discussion about the development of options and development of regions.

It was noted by Cédric Arseneau that in principle this would be the minimum information required by DFO and that DFO does not want to hinder the development of other products and add-ons. It was noted to please clarify that only the minimum would be a requirement of DFO.

There was a discussion about providing the 'nice to have' information, and implications for enforcement. It was also noted that enforcement is part of the software so precautionary is to have the minimum information.
Again the concept of some data being helpful for fishers and fisheries being collected in a model with faster capabilities is also a benefit.

There was discussion about the integrity of the data and how user friendly it is. Currently, fishers enter a one-page paper report, and adding anything new would need carefully considered. When more data is required, there are more problems and difficulty for fishers.
It was noted that when at sea, data is not always available to be generated or to be sent.
It was noted that there are certainly challenges to entering information on the boat and each fishery and region has its own requirements.
It was noted that examples of e-logs implemented cut the amount of time for completing paperwork from 30 minutes to only a few minutes as it was repetitive, or more easily generated (i.e., GPS coordinates).

Concern was expressed that the more technical the software gets, the more rules are required and the more costly it gets. It was discussed that the benefits of e-logs must be presented to fishers, to show why costs must be spent.
There was an expression that even with user friendly technology, fishers that are not familiar with computers may become frustrated with the software. It must be fast, simple and easy. Other examples of transition to computer systems have been challenging.

The Chair noted the range of technical abilities of end-users and noted that the goal is that the e-log system is to be the same concept as the paper-log book system. This needs to managed in the implementation, however the spirit of the process is to be similar to the paper system.

Standard – Principles

2.1 Affordability

Cédric Arseneau read the principle on affordability.

There was discussion that costs may increase so the current wording seems a bit strong. It was noted that affordability must be for software developers, fishers and DFO. Wording was suggested to change to "not significant cost increase".

It was noted that there may be cost-savings, including intangible savings, e.g. less time to input data by fishers or better catch logs generated.

A request to add that transmission needs to also be cost-effective was requested.

It was asked that if implementing e-logs might result in lower licensing fees. This would have to be discussed further.

2.2 Innovation

Cédric Arseneau read the principle on innovation.

It was noted that the standard includes DFO's minimum requirements for e-logs software, and the standard should not impede innovation and benefits to fishers.

There could be different versions of software (i.e. a lite version). The goal would be that the software technology would benefit all stakeholders.

2.3 Flexibility

Cédric Arseneau read the principle on flexibility. It was discussed that the operations in each fishery differ, and require flexibility. There was a discussion about transmission and input of data from sea or from the wharf as being an area of flexibility based on the fishery. What do they require and what is possible (technologically and operationally).

E-logs are to be filled out while at sea, the same as the paper logs are now, and this would be verified by inspections. However transmission of data could be done after return to the wharf.

Timing and order of data transmission was also discussed. Some reports may need to be sent before others and some need to be sent and validated before a fish harvester can fish more or send other reports. This would be also considered in qualification of the software.

There was discussion on 'dead-areas' for cell phone transmission both on land and at sea.

There a suggestion to add 'social' needs of fishing fleets to this principle. It was noted that at sea, sometimes only satellite is available and that is very expensive. Could data be transmitted daily or after each fishing trip? This will be determined for each fishery.

It was noted that XML transmission is very expensive if by satellite and perhaps binary code would be better for some applications and rebuilt into XML. It was noted that the rate of transmission needed to be reasonable and not a burden.

There was a question why the data had to be real-time as paper logs are not real-time now. It was noted that this would be determined fishery by fishery but this is outside the scope of this standard.
It was suggested that allowing some data to be transmitted less frequently would reduce transmission costs. This led to the discussion of 'blocking of data'.
There was a question of what fisheries require hourly or daily transmission of data. It was noted there are examples of daily reporting in fisheries that occur over several days.
It was also discussed that for lobster there might be a delay of up to a month before the paper log books are submitted.
There was discussion about NAFO requirements outside of the 200 mile radius and what daily yields are required.

2.4 Integrity
Cédric Arseneau read the principle on integrity.
It was acknowledged there are a number of ideas in the integrity section.

There was discussion about a fisher adding "one zero" too many: what the consequence would be, and what are the options to correct in a timely manner.
It was noted that integrity would need to be maintained in any "data conversion" from one format to another in the software.
It was noted that the fish harvester must be accountable for the system and not to inhibit data entry, but must prevent tampering (including avoidance of delays in reporting).
There was discussion about what occurs if the software can't accommodate the data that needs to be entered. For example if there is only space for example of two kinds of bait used but four types were used by the fisher.
There was a discussion about good business rules in the software and from DFO to prevent integrity issues.
It was noted that integrity of data doesn't always mean user friendly inputs of data.
There was a discussion that the software would need to be able to show the "sum" of inputs through a fishing trip.
There was a question about who gets the data and what is done with it.
There was discussion about e-logs data being sometimes 10-25% off the dockside measurement and what implications does this have and who will validate the information collected.
It was noted that data is processed quickly by DFO and sent out to the regions and that it would be fishery specific as to the data validation.
It is the requirement for the fish harvester to commit to the assessment of their load before dockside, the same as in paper logs. The data is blocked at a specific point by the fisher but the transmission of data could be from dockside or from their house, in some cases.
It was acknowledged flexibility and integrity of data need to be balanced.
There was a note made about what happens if the system is down or a hurricane prevents data transmission. It was noted that DFO does not chase harvesters for a 'missing zero' but it wants to identify people who are being dishonest. It was noted that key entries are easier to make than paper entries and so there is the need for judgment and understanding from DFO. It was noted that the software developers also have a role in ensuring integrity of data.

There was discussion about the benefits and drawbacks of a correction process and at what stage corrections "are not allowed".
Can allow data to be changed by fisher? Will need to ensure that data isn't compromised.
There was a discussion of vetting to ensure information could be upheld in court.

2.5 Security
The discussion expanded to when data must be "closed" and before that how it can be changed or fixed by the fish harvester. It was noted that DFO or the software developer should not be able to make the change or at least that the change is tracked and security is not breached.
It was noted that DFO's requirement is that it is the same as the paper log book with obligations and as a condition of license. There would be further legal review of these requirements to show that in court, data has integrity and was not tampered with.
There was discussion on business rules to reduce data entry mistakes. This could be defined in the XSD which would include validation rules.
It was noted that software is not intelligent and this must be programmed and with more "free fields" there are more problems.
The discussion returned to the need for daily information requirements and what data was required and when.
An example was given of this spring when e-logs data was considered in the decision to extend the lobster season. There was discussion that rules should not prevent the fisher from submitting data.
It was noted that the validation must be reasonable and there could be a "comment box" when outside of normal parameters.
There was discussion about privacy of data.
There was an example given of data minimization so that a "key"/code was used to denote a vessel (i.e. #5, not vessel _____ with captain _____) to minimize risk of data breach. Encryption of data results in very large bit rates on satellite.
It was noted this would be fishery specific.
It was noted that in a national system the data will go to a central repository and then the data is sent to the regions which is opposite of how it works now. It was noted that data should be made available to regional systems/users as quickly as possible. There was discussion about 'security on board the vessel" and "security of transmission".

3 Electronic Log Book System XML Structure.
Cédric Arseneau reviewed the e-log – XML structure diagram. (**Annex 5)**
It was noted that the version on the screen was updated from the version in the minutes of the webex meeting.
He reviewed the XML document and gave a description of the business story of the development of the document. He spoke that datafields from 2012 were compiled from all log books (about 120 in all). Each element of information (datafield) found on any existing paper logbook was studied and documented in a data dictionary, which is recorded in the e-log database (the data dictionary was created to document all the data fields of logbooks in one place and have the same definition of these data fields across regions).

New e-logs/electronic logbooks were structured according to "gear type", as each gear type generally uses similar fields. The XML diagram shows the common structure to all electronic logbooks.

A form is the structure of a specific electronic logbook. (Note that a form may use different elements from one region to the other). It is the set of nodes, composed of data elements of the data dictionary that will compose a specific logbook (ex.: Logbook for trawls). There are about 20 different forms, only some nodes/ elements will be used within an individual form.

He reviewed the Formv44-Trap-Lobster: the first column contains the name of the node and the second column contains the name of the data element.
He won't review the items in each node.

It was discussed that some fields may not be used initially, these could be used eventually, however, some may not be used after all. For example "sale" may eventually be used by processors, and 'weigh-out' may be used for dockside monitoring.
There was a question of the number of nodes in an xml file.
Cédric Arseneau discussed that blue boxes around the nodes was to denote linking of groups that would be transferred together called "blocking".
But it was stated that it doesn't always have to be sent at once, but that they are linked.
There was a question how this information would be re-combined then. It was noted that the software has links that would recombine the data and identify which is the most current and send out the data that in order.

The committee reviewed the lobster excel file with nodes, fields, and regional options denoted. It was discussed that "blanks" would not be in a form, and each region could have a form with different inputs. It would be a long-term goal to minimize the variations of the forms. Currently there are 6 regions with different logs.
There was an example XML form shown and a Sample XSD shown.
It was discussed that the XSD will help validate the XML information. The validation is limited but it is a good 'pre-validation' tool. This will help prevent software bugs.
There was a question about the number of efforts allowed. Can it have a number of effort types, i.e., Different gear and different fisheries in one software.
The XML should be able to handle this.
There was a discussion on multiple gear with multiple fish in the same trip: this is rare in Canada so this likely wouldn't be a need but it could be helpful.
It was noted that it was highly recommended that order be determined of how data can be sent in what order.
There was a question of why fields are optional, and whether optional fields need to be visible. It was noted fields are compulsory or optional in certain regions or fisheries based on current paper logs.
Fisheries however have flexibility, for example ground fish are required but shrimp are optional. Instructions will note which fields are mandatory.

DFO will decide on the fields based on consultation with Conservation and Protection (C&P), biologists, and fisheries resource management. They want a minimum number of fields, but similar to current paper books
The Chair noted that this is where innovation can exist so the software can show multiple fisheries, regions so the software can break down to specific fisheries. The Standard will only stipulate the minimum requirements of DFO.

It was suggested that developers should go for light and cheaper software for fishers as this is what they want.
There was discussion as to why DFO is requiring XML. It was discussed at the June 25th teleconference meeting that XML was the format for sending data to DFO, but that CSV might allow for smaller files for transmission. It was discussed that the requirement might be that data is 'received in XML' but not sent in 'XML' from boats; this would require data integrity.

An acknowledgement of data received is also required, including rejection of data, correction of data and security issues.
It was asked if the file could be unsecure during transmission by satellite, is this a concern of DFO?
Does it even need to be sent or can it be sent a few days later?
It was noted that the standard should be written to be 'data efficient' so that the size of files is minimized. The size of files is less of an issue if data is submitted at port..

It was asked if DFO was reinventing things, already in place through the e-logs pilots, and pilots on West Coast and in Quebec were noted. It was noted that the satellite fleet was a very small portion of the fleet in Canada. XML is a universal format and so DFO can't have unique systems.
It was noted that it might be cheaper to convert the data before it is sent by satellite.

There was a question on cost of the e-logs system. The Chair said e-logs costs were compared during the strategic review to the cost of the paper system and it was identified as a cost-savings. There was a discussion about a fee to use the electronic system and software may be the same costs. It was noted that not all regions bill for paper logs. It was noted that without numbers to show the costs savings it will be harder to sell the benefits. It was said that the cost-savings are there, though not readily available. There are also important factors like no more delay of data, no conversion of paper data and smaller entry data errors. The Chair said he will try to get the costs savings for this committee. It was noted as this was a cost to the Department which diverts funds from other programs.
It was noted that the high-majority of cases, transmission costs are not a significant factor.
It was asked if costs savings would come to be realized by fishers. An example was given of subsidy of the hardware and software to the fishers, in the EU it was about $400-700 up front. Another example from Australia: if a fisher invests in e-log, you see a savings, but if you go paper copy you pay for paper system. More information on these examples was requested.

There was a lunch break.

After lunch there was a recap of the issues discussed during the morning, including that XML would be required by DFO due to the volume of data received, the burden of supporting too many formats, and that XML was the most efficient and flexible for DFO, given the volume of data that will be received.

It was asked why not "JSON", or flat files which could be more efficient than XML. It was noted that other countries also use XML, so no choice on this format.

The Chair explained that other models had been considered and the XML decision was made but innovation may come.
There was a question on development and product management and if including fields for future use could be considered to be scope creep. The extra fields create 'noise' in the system but tend to stay in there and not be taken out. They should try to keep schema clean and to update the system over time.

Cédric Arseneau noted that they had considered this approach and the ideas was to show the field now to be forward thinking to very real and likely requirements in the future. It would be identified in the software to use as optional.
There was discussion that this approach has worked with other providers to anticipate future needs. DFO wouldn't add fields without a good rationale for current or future use. It was discussed that this should not turn into scope creep of both the e-logs and the fishers reporting. It was noted that it will be the work of this technical committee to avoid scope creep.

It was brought up that the arctic fisheries rely on satellite only and this is expensive so including additional data will be costly. There was the discussion that not allowing conversion of data might put an undue burden on remote locations and it was asked for assurances that this wouldn't be the case.
It was noted that the system would be built to meet a high-majority of the fisheries but that some fisheries may not be cost-effective to convert to e-logs at this time, but the point is well taken to help northern fisheries with data.

There was a question about the technical requirements and what is the process for higher-level costs, such as the cost for qualification. It was noted that until the standard is ready, this cost can't be determined. However DFO will consult stakeholders and work towards a solution. This technical committee is only a start. The management systems will be put in the place but they need this technical information, so it is too early to discuss.
It was expressed that the communication about this process was very fast and more communication will be required to make good decisions and alleviate concerns of stakeholders. DFO stated that communication will occur to ensure information makes it to stakeholders, and while this is ambitious schedule, it is only a few fisheries that will move beyond the pilot stage initially; it won't be 'wholesale' in all regions in the first wave of roll out. Fisheries and Oceans Canada is very serious about e-logs and it is essential to get a tool that will benefit DFO and the fisheries. This committee will help obtain the technical information that is required to move this process forward.

There was discussion if the ground fish trawl group going first. It was noted that the implementation plan for each fishery is still to come but DFO doesn't want to disrupt what is works already in pilots. It was noted that the first groups of fisheries to work with were not selected at random but are those with greatest chance of success.
It was discussed that communication is critical to avoid upsetting fishers. DFO needs to provide information about hardware, software, support and transmission and what savings will be incurred by fisheries. All fishers want to know is the cost to implement, as they haven't any frame of reference right now.

There was discussion about what architecture to have and needed costs. An example was given of the observers at sea program with a shared cost of 67% industry and 33% DFO and how this changed to 100% industry and prices went up. If the e-logs is perceived as being similar, fishers will be upset.

There are also discrepancies between fisheries. DFO costs are now the third highest costs after labour and fuel and fishers will want good examples before any program is perceived as workable.
It was also noted that many fishers will be resistant to technology on the boats and help will be needed to get fishers to implement this system. DFO training will be critical. There will be a greater need for office staff in the regions to deal with this type of support and training.

The Chair noted all of the discussion and was DFO is sensitive to all of the concerns. He iterated that implementation was not coming yet. The technical aspects that will be recommended by this Technical Committee will help in estimating what cost will be. DFO is working towards modernization, however reasonable affordability will be the #1 priority. This is working towards a better managed fishery, compliance with NAFO e-logs if that becomes mandatory and better market access for fishers. He appreciated all the good and constructive comments.

It was noted that in other jurisdictions that implemented e-logs, there was resistance by fisheries and they don't want e-logs on boats, so there will be a need to address this to gain the cooperation of fishers and showing there is a cost savings will be one way. Another way to get cooperation will be that once fishers realize the software can be user-friendly and helpful season over season, they will embrace it. For example, fishers can go from port to port to get the best prices, and get strategic mapping of places and times to go and this will be helpful with radar data.

It was stated that the industry should also include what they want/need in this software to make it an indispensable tool for fishers.
It was asked once e-logs is working, will the information become a tool for biologist as well? It was noted that some of the data fields are there for long term ideas but if the turn-around of data collection is not quick, it may lose validity of the data too.
There was discussion about advisory processes for management of individual fisheries, which are now on a 3-5 year schedule. There was discussion about experimental traps pilots being useful to fishers. It was noted that DFO's implementation of dockside

monitoring and VMS (Vessel Monitoring System) were long processes so hopefully lessons have been learned.
It was also discussed that DFO doesn't want to change the fields often for e-logs as this has challenges on the data sets.

It was asked how changes to e-logs will be managed: what the 'upgrade' process would look like, and would this be free or would this be something to purchase new software annually like QuickTax (tax software)?
The upgrades and use of new technology are very important for software, though grandfathering of people using old systems would also need to be considered. This will be important to show cost savings and not always upgrading.
It was noted that software must be kept up to date and typically this is not a major cost to users, maintenance fees could be also considered.

3.1 XML nodes
There was discussion about the transmission of data in XML and receiving acknowledgement in XML as well. There was discussion about having the national system and staying away from regional systems which will increase costs.
It was noted that DFO will have a national system, that regional systems won't be permitted. But the goal is not to lose the historical data either.
There was discussion about the review of fields collected and if there were good reasons for that data being needed. DFO noted that each region has 'sanitized' their data of what to collect and not collect. Examples of grid numbers in the Maritimes were important but not elsewhere and this makes sense to the regional operation.
There were enquiries about the structure of a national repository of data and how information will be collected from previous regional systems. It was noted that DFO regions need continue to have access to this information and they don't want to see a difference to old regional systems. But it is likely that the new information will be in the national system and the legacy systems will be the regional systems. How the data from the national system will get into legacy or vice-versa needs to be determined; migration of old data into the new system could be possible. There was discussion not to import the legacy system as this will lead to lots of issues.
There was discussion about limiting the sharing of geographical information like catches with GPS units of an area rather than specifics places (For example share "Grid 1" but not specific coordinates).
It was noted that the integrity of the data is required to be protected at DFO.
There was discussion about limiting the number of e-logs required, to simplify and reduce costs.

3.2 Data element
There was discussion about data fields being mandatory or not (optional). There was a question about what would prompt DFO to ask about 'missing information' and how these business rules will be set up. It was agreed these rules are typically in the software but that the transmission of the final file could re-validate the business rules.

It was noted that instructions for the software can't be on-line but must be in the software and they must be user-friendly. It was suggested that software needs to make it difficult for fishers to make data-entry mistakes.
There was a comment about the more business rules/rules in the software adds to complexity and cost for testing. There was a follow up comment that not to develop software that at stage "30" you have missed something that makes you go back to stage "3". It was noted that in other jurisdictions with e-log software, the process is very structured with many rules, for example you can only send a part of the information after you have completed another part properly. The timing of certain rules becomes very important.

It was requested that the software on a vessel should be designed so that a fisher can 'pick up' where they left off, such as half way through data entry, as fishing operations will be the first priority and will interrupt data entry. It was noted that any software would not be a singular point of time entry. It would be able to start, save, then finish, but it depends on the architecture of the software to save partial. Software will have blocking that when you close it at specific intervals, the data will be 'blocked' and it can't be altered without a call to DFO. How this is done will be up to the software developers and this may or may not be part of qualification of the software.

There was a point made about 'empty' fields, and whether these could be hidden. It was confirmed that the standard was written that any non-required fields would not appear in the software screen for fishers.

There was a question about the last sentence "all optional or required elements must be able to entered or changed and confirmed by the fish harvester". It was discussed that in the standard "required" means you have an entry, but optional may be an entry or may not be present on the screen.

It was discussed if the fisher would see the XML code. It was stated that they generally won't see the XML code, but may want to see the XML as transmitted.

It was discussed that the fisher needs to also be able to block and agree to the data before transmission. This might be for this section of the standard but uncertain. There was a discussion about an automated time out feature like in NOLS. This was recommended to put into Section 16 of the Standard.

There was a caution about the software creating corrupt data during a process of saving/ power outage.

3.3 Data Dictionary
Cédric Arseneau spoke that this section would be most of the data of the e-logs.
There was discussion about dates and times in UTC but an option to be able to display local time zones in the software.
It was recommended to remove the word 'generally'.
There was discussion to define the term 'start of fishing', e.g. gear in the water.

It was noted that these explanations could be included for both software and fishers.
It was discussed that the dictionary has an explanation for the terms and they need to get good, precise definitions.
There was discussion about terms linked to the nodes like "home port", but where there were exceptions, please send information and examples.
It was discussed about an automatic time zone or manually set by the fisher or set by home port.
Gaétan Gauthier said that DFO will require UTC, but if the client wants something else that is okay as long as DFO gets UTC. It was noted that GPS signals for time are superior over the local clock settings on a computer. The VMS unit or GPS time stamp would reduce entry error.
It was noted that the paper log only need time, latitude and longitude, but if the client wants ease with the GPS so be it. It was noted that GPS does bring integrity to the data so DFO may want this.
The Chair spoke that there can be a balance between getting the mandatory requirements vs the 'bells and whistles'.
There was an example given of the differences in time/date when the data is registered vs. when it is sent. For example the data was 'recorded' at 3 pm but transmitted to DFO at 10 pm.

It was mentioned that there could be a block of time (i.e. block of hours") or other units like a series of tows, to group catch information. This helps organize data for the fisher and DFO. An example was given of a crab fisher missing a buoy and not entering data until 7 pm that night. It was discussed that e-logs shouldn't depend fully on technical elements, e.g. system could be down.
It was noted that data will vary according to the fishery: e.g. fixed hours, traps in the water, day(s) of immersion.
It was spoken that if this data was to be used against fish harvesters or as a tool for C&P to control or monitor even more, the fishers will not use the software.

Cédric Arseneau spoke that everyone is aware mistakes can occur in the log books and they are aware of many types of errors that occur and DFO wouldn't go after someone for minor mistakes. The system will be the same as what is in place with paper logs now.

There was a good discussion about "units". Metric units will be required but an option to allow for imperial units and conversion is in Section 16. It was noted that some fisheries like 'pounds' or 'tonnes'. There was a suggestion to force unit entry or unit confirmation.
It was asked what the GPS datum would be and it was confirmed WSG84 so GPSs would have to support that.

3.4 Forms
Cédric Arseneau introduced the idea of forms being unique for fisheries and regions. It was noted that more than one form at one time might be used by DFO (i.e. a new one and one legacy for people that didn't upgrade yet" but only one "official" form. 2 versions max was highly recommended by the members and this would force upgrades of the software.
The system would need to support multiple versions.

There was discussion about free vs paid vs subscription upgrades.

It was asked how is it defined what log a fish harvester must use, especially if they have several regions or ports. When is the file transferred?
It was discussed if log books are different from region to region it would be good to know what those differences are. It was discussed that an identification number would define what fishers are in the regions.
However an example was given of fishers on the Scotia Shelf and they would fish in the Gulf.
It was hoped that standardization in the log books would enable multi-region fisheries.
It was discussed that there are software solutions to multi-region, multi-license and multi-gear already in Europe. The goal is to distinguish between inputs required and outputs.
There is a difference between what the software will collect and what DFO requires and this is in the application.
It was discussed if the structure of the XML changes from DFO, new versions would be required vs firmware upgrades.

3.5 XSD
There was discussion on the difference between forms and XSD. It was noted that you cannot validate the report in XSD, and the form is part of each unique fishery with different requirements (for example frequency of reporting).
It was asked why rules are in forms or XSD. It was noted that the forms are more clear for people who don't have technical knowledge.

It was noted that XSD is hard to work with, but that XSD is useful to communicate between databases, but hard to check against forms.

3.6 DataGroup
It was explained that data groups use the dotted lines in the diagram to denote "linked and blocked data". This may or may not be useful to the Standard.

It was asked how validation occurs if fish harvesters have sent all the data required. For example missing a tow or missing a daily report. Or what would happen if data was missing and before new data needed to be entered.
It was noted that the process for this hasn't been worked out and would be defined in the software if needed.

Meeting Ended at 5:00 pm Day 1

Day 2 began at 9:00 am

6. Review of day 1

Participants from yesterday were confirmed and it was asked if there were any new participants joining the meeting.
The Chair opened the day thanking everyone for excellent discussions yesterday and discussing the full agenda today.

3.6 DataGroup

Cédric Arseneau again discussed the concept of grouping data sent to DFO and the blocking of data. It was discussed whether data could be sent 'out of order'. It was noted that it wasn't known if step "B" could be done before step "A" in the process.
There was discussion about "blocking" being the need to have commitment from the fisher on the information entered. Once it is blocked, it is final, cannot be changed, and can be sent to DFO at a future time/date.
There were discussions about different types of fisheries such as off-shore shrimp blocking/ reporting daily vs lobster that return to port 'each day'.
There was a discussion that not every trip requires gear.
Also discussion that not all nodes in each form would be required each time but need sequential order and blocking. This needs to be captured in the Standard.
Discussion on blocking portions at different times of day (am and pm) and transfering as a complete data unit for the day. A group can't be edited once final.
There was a discussion about default values, for example default to the same home port, landing port.
It was noted the term 'quota' is only applicable to Newfoundland and Labrador forms.
It was asked if it would be possible to enter a few groups of data or if this could all be done at the end of the day. Some fishers prefer as the harvest occurs and some prefer all at once.
The concept of auto save was also mentioned.
The software companies recognize the need for blocking but it can be an integrity issue. After data is compiled, need to allow for errors to be fixed before committing the data? Could data be 'unblocked'? So until the fish harvester wants to send to DFO, they could fix up the data and save before transmission.

There was a question if the term "block" inferred 'legal signature'. The Chair responded yes, it was a legal commitment. He stated this could be a condition of license.
It was then discussed whether fishers would block the data at the wharf, or would the data be blocked later on after a review and send from home? A discussion on good reporting practices was raised.

It was noted that compiling a report is different from the transmission of the report, for example a 'last check' of tax return can be done before sending to CRA (Canada Revenue Agency). It was noted that the software needs to give the fish harvester a way to fix errors.
It was discussed that perhaps 'blocking' isn't the best term to use here. Blocking is the last conscious action the fisher would complete before transmission of data.

It was noted that you could have 'warnings' and fix errors at some point before committing the data. Validation of the information is done prior to blocking and the software needs to be able to do this.

It was noted that a "Corrections Procedure" needs to be developed so that once the data is sent to DFO, records could be corrected. Could be done over the phone like CRA example.

It was asked if you could do this in a spreadsheet and then email the sheet to DFO, as this would be easier for fishers to learn. Can things be corrected at the wharf and is the fisher aware what triggers the block.

Quota fisheries vs. competitive fisheries are an issue for recording the data as it could be deemd a 'crime' not to report because in the quota fishery what determines 'catch' is what is weighed at the wharf.
Again it was noted that the intent is not to change the rules that govern that fishery, just how the data is transmitted. Fishers can take comfort that general processes for enforcement and violations will remain the same. As well there would be flexibility for the learning curve that was there but that DFO will work on what the correction process would be.

A point was made that allowing corrections will cause issues in the software. If an error is fixed, will be off from what the fisher has in their records. And what happens when the scientists get the data and it is put over several data bases. Again the good correction procedure is very important.
It was discussed that perhaps two levels of validation would be required, one from the fisher/ software rules and one from DFO/biologist/observer. The fisher would review and DFO would fix exception reporting… for example fisher 1 said 120, fisher 2 said 120 but fisher 3 reports 1200!
It was noted that the log book is only an estimate. The dockside is the actual measurement and that while fishers know typically the catch within 5% or so, typing errors are more likely.
It was noted that the integrity of the data in e-logs would be the same as the paper system.
The example of Netfile of tax data to CRA was that you could save but once you checked it and committed the data it was sent.

There was a question about units of measure vs the size of mass for those units. Shrimp bags were typically 10 kg bags but this is only an estimate, and at the wharf it could be 11 kg or 9 kg. However it would be useful to the harvester to know that three trips or three years ago so many bags were from an area to compare seasons.
It was noted that no other additional accuracy was needed over the paper system.
It was discussed that the supply of data in real time or near real time might have errors but it is workable and not a way to control fishers. It could show trends over time in season and in areas.
A lot of information and effort of harvesters is required to supply electronic information to DFO. There was a comment made about no suppliers giving or entering 'sales slips' and this would require discussion with the provinces/territories. It was noted that the Dockside

Monitoring Program (DMP) information could also be electronic. Noted difference between "errors" and "deliberate hiding" of information in e-logs.

It was asked if this could be a principle in the Standard that the e-logs system is not to be unnecessary, inconvenient or put onus on fishers, and that fishers should not have to 'do more' than what is done using the paper system. The intent is not to change or add but only to change the delivery method of the data.
It was asked if it was the plan to supply the weigh-out slip as well. This would vary by province/territory or even areas (1A to 1B). It was said this was the concept but not thought through yet. Eventually more information that comes into the system the more the robust and better the system is, but these are concepts only.
Compared to DMP and purchase slips, e-logs is the biggest challenge and most benefit for savings. DMP is on shore and the processor is on shore so the gathering of data would be easier.

It was asked that there are a number of items not in the blocked nodes so what happens to them? What will be transmitted ie. General information will always be there so is this just a heading to the document or metadata.

It was noticed that landing doesn't have blocking but bottom nodes do so this requires a line around it.

It was noted that the data required right now in "general information" would be 274 bytes of data each and every time in the full XML, so this would be expensive on satellite. However there could be a 'key' for the information link to have space savings. For example netfile doesn't send the name and address, it has this beforehand.

3.7 XML file names

There was concern that the vessel number would be an issue for identification as VRN (Vessel Registration Number) can change. The license number should be the key identifier as the fishery doesn't need the boat number. DFO will look at this.
It was noted that XML file name shouldn't contain data. It was noted that the license is a key number and uniquely identifies 90% of situations.
It was noted that there is some duplication of vessel numbers in different regions.
It was noted this adds another 30 bytes of data.
It was noted that the Arctic fishery may not have license numbers and they need the e-log system.
The Chair noted that the e-log system would be built with the goal of implementation in all fisheries and regions but there are a few examples of fisheries that need more review and cost analysis.

It was noted the cost of the software converter might be less that XML transmission over satellite but this is not an issue over cellular.
It was recommended the standard be written to be 'data efficient'

3.8 Character sets

The question was asked if the software must be bilingual. It was noted yes, but this will be deferred to another section.

7. Review of DFO Standard (Part 2)

4 Data Recording

Cédric Arseneau discussed the concept of data blocking: internet access will not always be present but the integrity /security of the data can be maintained by blocking data.

It was asked if this meant the data must be encrypted on the vessel? It was discussed and agreed that that was unnecessary, though a password should be required. Data blocking again came up as the way to prevent data change after an occurrence but this is open to modification. The concept of validation of the data and blocking only prior to sending was discussed.

The concept of "arrival at dock" vs "end of fishing" was also discussed, of which it was agreed that the license wording for the current paper book for each fishery would be the requirement.

It was asked if the change and correction process be part of the prior to transmission occurrence. It was discussed that the correction process envisioned was the one similar to the paper logs that you must call DFO to make a change, and this would have to change in the regional system.

5 Data blocking

It was asked if there would be an audit system to see who changed information including what and when, including at DFO. It was noted that the chain of custody of information is critical. While it was noted that the fishing catches were only estimates, it was noted that e-logs does have sensitive information.

It was explained that the e-logs system must operate the same way as paper logbooks, and e-logs may be used in court. Often logbook information is not the sole source of evidence, but shows some additional information and it helps with errors when presented in court. It was discussed that the data should be blocked by the fish harvester prior to arrival at wharf.

It was noted that in Europe the information can be fixed prior to final submission, with reporting of the original information as well as the changes.

It was discussed that another way to record changes would be a log of the original and new log with the changes to show transparency of all of the information.

It was discussed that in the EU, fishing logs had blocking first, but then it was dropped because there were too many issues. Now there is a two-stage blocking, both at sea and then at final commitment. Only then would the correction procure be needed.

It was asked if the change procedure was needed in the standard or just as part of the license condition. It was suggested that it be in both places as it will help the development of the software.

It was discussed that a cancel report in NAFO was the original, the cancellation and why it occurred.

It was discussed that the data is to be blocked before the arrival at the dock. For example if estimate of weight of shrimp is 100,000 vs 125,000 lbs, what happens? Why is blocking needed? The blocking would be similar to signature on the paper log.

A summary of the discussion was that the data is blocked and then sent, but a mechanism is needed to fix the data, so this is why it is complicated.
A British Columbia example was noted, where the e-log is completed but it is not possible to transmit data. The file closes and then wherever data can be transmitted, it is done. Thus the software must be written to be operated without transmitting immediately.
An analogy was given about the trucking industry log book, that if you don't keep the log book up you can get a ticket, but if it is crossed out, it is okay.
It was noted that a multiday fishery daily reporting is important, whereas a day-trip fishery it isn't as critical. But it is important that the software accommodates both ends of the fishing trip spectrum. It was noted that there may need to be a review of the management process in the Standard.
It was discussed that the data must be continuous, and then report on the correction and only the element that changes should be changed… it prevents fudging of all the information.
It was noted that a fish harvester must complete the log book before you arrive as the license requires you complete it before you arrive. Though it may be an estimate, it is still a requirement and this should be done before arrival at the wharf.
It was noted that the lobster fishery will see this as a plus. If you have 1000 lbs recorded at sea but only 500 weighed, if you are missing constantly 500 lbs this may show a problem and if it is repetitive, a red flag. This is very important for stock management and for landings to be accurate.

6 Default values
It was noted that the software should not populate data without confirmation of the fish harvester, so it prevents the problem of "I didn't know".
There was a discussion about 'carry over value' and 'default value'. A carry over value is not needed every time it is entered whereas a default value is a population by the software assuming an answer. It was asked if you can have empty default values then.
An example was given that isn't important that the lobster harvester repeats "lobster' but this important information to DFO.
It was discussed that terms of "auto fill, carry over value and default values" would be defined.

7 Language
It was discussed that the information fields and data at DFO was in both official languages.
It was discussed that the software shall have both English and French options. It was asked user could alternate between English and French, or if it would be decided at the start of the trip, or if English and French could be separate versions.
It was noted that the big costs are the user interface, support and instruction of the software.
There was a comment to leave adequate field space for large values being bilingual.

It was noted that if the software was separate 25 versions times 2 languages is a lot of programming. It was also noted that software qualification would be doubled if there were two versions, as both need to meet the specification set out. If the software is bilingual there is a bit more testing but only one qualification certificate would be needed. The test would need to be robust enough.
It was also noted that the code must be robust enough not to be language specific.
There was also a discussion about no language differences, such as numbering set up, clock time set up and the comma in the numbers.
There was discussion about Acadian French terms vs Quebec French terms, that international French was used but to watch for colloquial terms.
There was discussion to consider the use of aboriginal languages as well, and thus aboriginal character sets. It was noted that most commercial fisheries are English or French but subsistence fisheries might be different.
It was noted that icons might also be a way around the issue.
It was asked is the database bilingual or just the user interface, and are the table of values structured in English and French or do they have regional variances.
There was discussion that if the user interface wanted colloquial or icons, it is okay in the software.

Jim Richards spoke about the terms 'certification' vs 'qualification' in software development.

Secretary's note: The minutes have been modified to be primarily 'qualification' unless certification was uniquely meant.

It was noted that certification primarily refers to health, safety or regulatory areas and requires annual certification, thus is typically more expensive. Whereas qualification is a program that checks on the conformity/quality of the program. That it is why the "At-sea observer Program" is a qualification program.

Cédric Arseneau stated that what needs to be translated in the database is already translated so it is only the user interfaces and support that need to be translated, and these can be English, French or both on the same screen.
It was asked if the language depends on the demand in the region. It was noted that because it is a national program and a national database, it would be bilingual. There was discussion on the 'hardship' argument of the cost to develop a French version, for example, in the pacific, as the cost is borne by fish harvesters, not DFO.
The Chair noted that it will be bilingual for now, but he will look further into the exceptions.

8 Data Access
There was discussion about passwords and only the fish harvester knowing the password and the developers not having access to this information. It was noted that the developer could reset the password.

It was asked if the software even needed a password since the paper log books aren't in a safe on the boat. Also the issue of forgotten password implying that you can't go fishing would be a major issue.
There was discussion that the computer likely also has a password.
It was noted that the password protects DFO and the fisher of due-diligence, of "I didn't enter that" so it ensures the fish harvesters are responsible for the data.
It was noted that also forgetting user names, in addition to passwords, makes up about 50% of the calls in some e-log pilots.
It was discussed that there was a balance between protecting data integrity and flexibility of use for the fish harvester.
Options of the fish harvester being allowed to opt out of the password, or separate sign-ins for other crew members were discussed. As well an 'auto-lock' requiring a password after data timeout.

It was noted there are many ways to overcome a forgotten password (administrative, email reset, secret questions etc).
The fish harvester has information that may be over and above what the inspector is allowed to see. There was a suggestion of a change so that the fishery officer can see only the data they are ***allowed*** to see
It was noted that access is needed for developers to fix corrupt data.
It was asked if the data requires encryption.
It was noted that fishermen will need help on computers but DFO may not be accessible.
It was noted that NOLS has a multi-user interface and they are trying to restrict data protection to also protect the fisher harvesters. It was noted that many have a secondary password as well.
It was noted that a password is at minimum a functionality to consider going forward and that the application on the boat is up to the fish harvester.

It was asked who would need the username/ password, as the owner/operators, first nations or corporations/associations may act on behalf of the captain. In NOLS, they may act on behalf of the fisher.
It was noted that many of the fishers log in only one or two times a year, so 50% of calls are for reset. It might also have peak times during the fishing season.
There was discussion about the use of GCKey, like CRA, NOLS to link up as too many passwords already exist for DFO applications.
It could be written that the business rules match NOLS. The software could have questions to reset itself, without being online.
It was noted that if a fish harvester was on the boat and the password isn't known, the harvester still has to fish. It was noted there is an example of software that is buying software user name /password for 10 captains.
It was noted that some fish harvesters may ask someone on their behalf if they are not computer savvy.
It was noted that portions of the software may need a password, like when logging to the web access. However other parts may be just a warning and it is up to the fisher as it doesn't need an access password.

Again it was iterated that it is managing risk and consequence so the onus is on the fish harvester. I.e. if you lose your PIN on your bank card, you are still responsible.

It was noted that in Europe everyone has a password and this was demanded by the fish harvesters. It suggested that the captains know how to operate a sea vessel, they know about GPS, radar etc. so they can handle a password. The key is if they want to use the software. If they are reluctant to use it, they will be incompetent with the software. A password is required when sending reports.
It was noted that maybe the password could be optional, at least for portions. It was suggested that the text of the standard be modified to authorize other persons to use password of a fish harvester.

9 Interference
It was noted that this is easy to say, but not easy to assess. It was asked how this would be qualified without specifying the hardware in the standard. It was noted this could be part of a service standard appendix and not a qualification issue.
It was noted that before there were issues with GPS interference but no longer.
It was noted that not to block the "com port" and windows has some security issues relaxed (not Windows certified)
It was noted that in the pilots e-log and electronic scales had some interference.
It was noted that the onus would be on the fish harvester and software company to resolve.

10 GPS
The three generating readings were chosen because it was to ensure validation, not generating errors.
10.1 GPS Response Analysis
It was noted that the polygon is around all of Canada. Most of the forms will have GPS data in it, likely off of the forms.
DFO knows that GPS data is a challenge but more and more fish stocks and fisheries are using GIS.
The VMS system can pull the GPS data, and there are other options like a USB key GPS.
It was asked what the GPS format was, and it was responded this is the dictionary as WGS 84 Datum.
It would be ideal if as you fill in data GPS data occurs, but this will depend on the fishery, for example if an automatic digital file when you enter data vs the whole catch.
It was noted that GPS may not be automatic but entered manually.
It was noted that supplied hardware may be cheaper than the software being on a smartphone.
The counter to this was that there would be pushback from the fish harvesters of having to purchase hardware.
It was noted that most boats don't have computers and some are without cabins.
An example of 1300 fishers on PEI and there is only 1 computer on a boat but 60-70% have smartphones.

It was noted that different fisheries have different hardware, so the standard should be written to be flexible. It was recommended not to enter hardware into software standard.

The example of the crab fishery with VMS was $5000 per unit for each fisher, which is not cost effective.

An example of the cheapest solution may be not custom hardware but a standard computer that was worth $250 is still expensive.
If the data must be accumulated and stored on a device, this is an issue. The smallest hardware is often not the best hardware.
It was noted that the standard would focus on capacity, so why it is written this way?

It was asked if and where GPS is mandatory, if C&P requires it, if GPS allows it and then if the manually. The timing of data is affected too. This section needs more discussion.

Cédric Arseneau stated that this was a question of implementation, paper and e-log could co-exist.

An example of the remote Shetland Islands, that they gather information on paper, they input it into e-logs at shore hubs and then transmit might be a good option.

11 Data Transmission
There was a question of retransmission to DFO, and suggestion that this is not a good idea unless there are problems. Question on what happens when transmission fails? Do you need a receipt? Could lack signal on the vessel to say the message failed.
There was a question of what securely transmitted is? Is this encryption?
It was noted that only the fisher can send the personal data.
It was asked if it was a 'safe' transmission, if it is on an https website to the database.
It was noted that there is no requirement from the software to endpoint?
It was noted this was not answered in the standard by DFO but up to fishers and software groups to work this out.
It was noted that security was either HTTPS, or encryption of proprietary information?

It was asked how many fish harvesters have to send information by satellite - satellite likely won't be hacked to get this information, information could be hacked other ways.
Data from individual fish harvesters isn't that valuable to external parties. DFO server would be a more likely target.
The information is what is estimated by fishermen.

It was noted that cellular services are available in many areas but note that Newfoundland and Labrador and the Northwest Territories in particular, don't have good coverage.

It was asked if the data could be sent from home – yes this can be possible. It would be good to get coverage areas and many get a discount if they all agree.
Many homes have internet now, though speeds and reliability may be a challenge in non-urban areas.
The frequency and timing of data collection would be part of each form for the fishery.

It was asked what the speed would be to send the data to DFO and what time-delay for receipt would occur.

An example of compiling the report, leaving in a queue, then waiting when within cellular range and waiting for acknowledgement, and then printing this in a report.
There was a discussion about positive acknowledgement (receipt back) vs negative (no feedback within 15 minutes, so it is automatically resent).

It was asked what the need was in the fishery for near-real-time data, as the harvesters must give real time transmission and acknowledgement and this could be costly. By satellite this would be a few minutes "up" and a few minutes "back"… what fisheries are managed by the hour? Most are a daily basis.

It was asked if there would be a confirmation number acknowledgement. It was responded yes with the data about the trip, etc.
It was asked if the web-service can have partial updates. It was stated that XML and the key would have all standard envelope information.

It was asked about NAFO reporting outside the 200 mile report to Canada.
The water polygon around Canada for GPS data is all water, not just Canadian.

It was discussed that it was not a good idea if the transmission of data is automatic, the fisher should actively/deliberately send it. However, the software could automatically generate a "warning" that file hasn't been sent yet.
It was noted that compiling, queuing data, validating the data and then sending the data is not just one action of "send". What if you don't receive the acknowledgement, what is required to say "resend". It was noted that you need awareness that they system is trying to send and that you haven't received the confirmation number yet.

11.1 Prerequisites
There was discussion about the "hash" key and not the "e-log" key as the term used at the teleconference. Is there is one e-log key for each captain, several for each vessel and crew members?
For NOLS letters were sent with key identification. It was discussed that e-logs could use the same key.
It was asked if there would be problems if one key was used in multiple software.
There was discussion about identification by account and not by license, such that 150 vessels all in the same NOLS account.
It was agreed to remove the term "e-log key" and get a new term. "E-Access key" could be used, the ID is used and registered with DFO.
It was requested to remove the term "cut and pasted" as this is specific to certain applications.

11.2 Web Service
It was asked if the information was transmitted by a third party intermediate on behalf of the fish harvester, does the information require Https and XML or not. If it is okay then the

send is successful and if not the send is unsuccessful. Who would also get the message back saying it failed. It was said the message would go back to the originator.
It was noted that the software provider server would need to send the message and the message back would go to the software provider server, on behalf of the fish harvester. It is based on a SOAP envelope, the benefit is that it is an in-between thus there could be savings in the transmission.
It was asked if partial transmissions would be accepted? It was noted that when it went through a third party server, partial transmissions would be part of the service agreement with that provider. However it was noted by DFO that it could be set up like an email where you send it all or not sent at all.
A question was asked what the plans were for testing/reviewing successful data transmission. If there are errors in the software code, could there be put in place a "testing web service with DFO".
It was asked if XML can be as a SOAP or does it require to be in XML. It was also noted that the acceptance message comes back as XML.
However then it was noted that this is only true in 'positive acknowledgement' not 'negative acknowledgement'.
It was asked if hackers were generalized information vs detailed information to debug. Currently the standard is deliberately vague to prevent hacking or will it need more detail.
There was a comment that a code of error message, for example '105' where each character has a specific meaning.
It was asked if there is more information, is authorization needed at this step.
It was remarked to thing about error messages and what specifics can be put into the error message to help debug, for example a "e-logs general "500 error" isn't helpful to resolve any transmission issue.
It was asked if the software can send XML and can receive XML and translate back so the "105" (example above) is a meaningful message to the fish harvester.
The Chair spoke that clear error messages are required for fishers. The discussion then became very technical as to send the XML files, to talk to the web service to DFO with a SOAP envelope. The wrapper / standard says an XML file. But the file could be 7zip or XML. It's there a wrapper base 64 of binary into text, to the transferring of data and getting data back. As well, how to file the comeback portion to the software.
It was asked if there is a response 64 bytes, then it must return the same way as 64 bytes.

It was noted that this process can be easier when all the information is parsed anyway. The word 'file' is not the best to for this standard in a SOAP structure 'of sending file'… sending is something else.
It was then discussed that base 64 will accommodate a formatting of sending a 'file'.
It was noted a sample may be helpful in the standard including a response of errors file.

11.3 Transmission Frequency
This also includes information from the 'forms' for each fishery.
It was noted that affordability of transmission from satellite will vary, for example fisheries transmitting in real time or once a month. It was noted that this requirement for frequency of transmission is set by C&P – why does this vary?

It was noted that one transmission could have several sets of queued data, but if a response doesn't come back, the data might have to be resent.
There was discussion about the bridge on transmission and where the wording for compliance would be found.
It was said that DFO didn't want a daily fishery having a batch of a week of data.
It was noted that if it is sent in often enough, there may not see a benefit of batching. Sometimes file compression makes the file bigger!
It was also noted that short-burst, there is no cost if no information is sent over satellite.
The service providers could work with DFO to get savings in numbers with economies of scale.
It was suggested that a flow chart of the flow of information, including error diagrams and sample data could assist the comprehension of the Standard.
There was discussion if there were data plans that had cheaper rates in off-peak times. It was also discussed that an additional $60 dollars per month to have coverage for a device is still a cost to fish harvesters.

8. Review of DFO Standard (Part 3)

12 Application update

After the topic was read, it was stated that updates should be restricted to a couple of weeks before any season began and that updates required mid-season would be an issue. Others also spoke that an update during the season was a very bad idea unless it was a critical one.
It was suggested that two weeks before the season no updated are required.
It was noted that as the software population is small, each software license could be tracked for an update. It was hoping that a critical update would not be required.
There was discussion about the many types of upgrades available, including enhancements to the software, thus non-critical updates could have multiple versions in the course of a week. However these may add value but not be required for re-qualification each time. It was noted that every update can't be held up waiting for re-qualification.

There was discussion there were 4 types of upgrades

1) bug fixes
2) update edit issues with no re-qualification needed
3) update XSD from the authority and this should only be every few years
4) new definitions, new fish, new gear types etc.

It was noted that the process for updates needs to be very structured as it needs to be tested in a DFO server tool first, then sent to vendors to validate vs the XML and then sent to users.
It was noted that DFO needs to allow for a 'work around' so you can 'cheat' or have an 'option' in the software to select.
It was asked who were the two authorities in the text of the standard, as in who is a 'competent authority'. It was discussed that the authority and qualification provider hasn't been established yet.
There was a recommendation for a code level, checklist level qualification.

Cédric Arseneau stated there are many types and options for certification and qualification so DFO would like feedback on this section.
It was noted that fish harvesters have no control on updates but to try to keep updates/e-logs as simple as possible (one page). It was noted that the paper version has been stable, but the e-logs is always changing.

It was asked about the numeration for updates, such as version 2.1, 2.2 and 2.3 not needing qualification but 3.0 would.
It was asked who pays for software updates, if they would be free. It was asked if a fisher could reject an update?
It was noted the DFO will review all of these ideas.
It was noted that if there was an update to the XSD to do this over wifi, not satellite.
It was recommended that a notice be sent to the software saying an upgrade is available.

It was stated that updates will always be needed and many times these updates are useful to fisher harvesters. It was noted that an update could also happen with a USB key or similar device.

It was asked if the forms could be "locked" for three years at a time once in place, but that there would be a lot of trouble shooting of the software for the first few years.

It was noted that some updates are controllable and some are not and the service provider would provide the updates and these could be voluntary, in some cases.
It was asked if the log book software can be updated with not all the bells and whistles, for example how the interface is updated.

12.1 DFO Instructions
It was noted that the use of e-logs could be a condition of license, just like the paper book but this would depend on the fishery.
It was noted that it is important for the software developers to understand the market for the software, so information is needed on what fisheries would require e-logs as a condition of license.
It was noted that this is a good point when and where this information occurs. DFO will add a 'condition of license' page.
It was stated that instructions could put more cost into the software, but a 'mouse-over' or a weblink is an option for this type of information.
It was noted that this section of the standard is prescriptive, could move to section 16?

12.2 Security
Cédric Arseneau stated that DFO IT security department had reviewed the draft standard. Though it was recommended that a password be in there, based on earlier discussion a password may or may not be useful in portions of the software.
The concept is that with either conversion or transmission if there was a court case it must be shown the trail of the information isn't tampered with.

It was stated that if the data was blocked, the concept of transmission 'hacking' wasn't practical and that transmission could be considered as 1:1 by DFO.
It was recommended to remove the term "fool proof".
It was recommended to remove the 6 month new password requirement.
It was noted that these specifications are for government constraints on data and encryption but that even a 'bank' password wasn't this onerous.
The Chair noted that it is the due diligence of DFO to recommend measures to manage security risk but it is up to the fish harvester perhaps if they want to put these measures in place.
It was recommended to remove the term directory as it is a database.
It was noted that there is a conflict of the 'key' without the XML files and that it would require masking of some of the data/values.
It was noted that the transmission from the computer to DFO is traceable.
It was noted that documentation of how the data been handled throughout the lifecycle including who had access, will be required for any court cases.

It was asked what data is considered sensitive. Are there portions that can be considered 'unsecure' or use a key value. It was asked if protected meant "Government protected A, B or C".
It was noted that a proxy server may not be practical.

It was asked if the password should be a guideline, recommended by DFO.

13 Application Support
It was asked why French would be required in the Pacific region as a software support would never take any calls. It was asked if the software support was regional or national.
It was discussed that one e-log pilot was currently groundfish and was rolled out as English only and that maybe paper log books could be available if needed in French.
The questions were taken under advisement by DFO and that currently it is seen as a national system so it must be in both official languages, but there could be ways to lower costs.
It was noted that if a federal department has a duty to offer service in both official languages, if 1 fisher was to bring this up, there could be legal risk for the government.
It was asked if billing was also in English and French. It would be reviewed for the requirement of the law - may depend on the region.

It was noted that if the software support was by email this could be cheaper option as the real-time cost for support is high. It was noted that the level of support, not the programming of forms that is the greatest expense.
It was noted that requirements for other programs like VMS should be reviewed.

14 User guide
It was stated that the help file /user manual could have two languages, but to keep the software small, the some skippers wouldn't need the French user guide at sea.

It was noted that a back up to the e-log software would always be the paper copy.

However fishers may no longer have the log books so a 'similar to paper log book" information would be required.

It was asked if there would be user training, and to transmit a 'dummy file' to qualify the software or to verify the software by the user.

15 User Rights

It was stated that DFO would get a copy of the software user license agreement and could require changes.
It was asked who 'owns' the data and does the service provider hold the data.
It was stated that software companies are 'custodians' of the data, but the information belongs to the harvester and can't be reused by others. DFO gets the data too and this could be in the license agreement.
It was asked who owns the data, the skipper of the boat or the fleet owner. It was stated this should be part of the user agreement between those parties.
It was stated that wording could be changed: the fisher would "agree" or "accepted by fisher".

The day ended at 5:15 pm.

9. Review of Day 2

Day 3 began at 9:00 am
Participants from yesterday were confirmed and it was asked if there were any new participants joining the meeting.
The Chair opened the day thanking everyone for excellent discussions yesterday and discussing the full agenda today.
He noted that there would be time at the end for a re-cap of information that was missed for participants on the phone during the technical glitches during the first two days.

Review of DFO Standard part 3 (continued)

16 Recommendations for Application Developers

Gaétan Gauthier opened this section by stating these are recommendations only for the software and it might be useful information in the development but these parts will not be verified.

16.1 Compact Code Tables

It was noted that some of the code tables are loaded with a lot of information, up to 4000 entries, such as ports of call. The fish harvester will only use a few most frequently so either the software can 'remember' the preferred ones or they don't need the 4000 transferred, only 2 or 3. Also they don't need Pacific ports on the Atlantic coast for instance.

16.2 Client Application Architecture

This section notes constraints of working on boats.
It was noted that this is important that DFO will have regional and fisheries specifics, so it is hard for the software to know certain requirements. So this is a good place for DFO to provide information, such as weekly vs daily transmission, as it will affect development.

Cédric Arseneau also noted that the forms will also be like client application architecture and they will give much of this information to the software developer

16.3 Client Application Physical Architecture.

This is similar to 16.2 as the vessel space issues, wet conditions etc. should be taken into consideration.

16.4 Accessibility

This section deals with accessibility, including larger keys, colours etc.
It was asked if the system must be operated by touch or are microphones allowed. It was noted at the statement will be changed to should, not must. DFO won't deter innovation.

16.5 Profiles (default values)

The system could allow for 'default' values so that information doesn't have to be repeated, (auto-fill-in). This could include the vessel, name, gear type etc.
This is a recommendation again, not a must.

It was asked if there would be information like caption, license #, etc or to have important information like to have quota, performance of the fish harvester or captain name as this is not there in the paper logs.
It was noted that the vessel number is very important to track information. It was stated that the e-log version may get a bit of a 'finer grain' of information than the current paper system.
It was noted that a fisher may use two boats in a season, for various reasons. It was noted that the boat isn't as important for information tracking as the license number. Ten years ago the boat was very important as it was visually seen by all, but now the license is key. It was rebutted that the buyer still only sees the boat and often the license is not included on the sale or wharf information.

It was discussed license, owner and boat could be used – discussion also on using "trip".
It was noted in the Arctic, it is different than the rest of the country. This may or may not be sufficient information to identify the process. It was suggested to link to other databases now, such as VMS and at-sea so that there is a common denominator set now and not impossible later.
It was noted that the log book also has metadata information too such as hailer #, trip reference # and is flexible for the metadata.
It was asked if the e-log ID was the 'unique identifier'.
It was stated that this wasn't always the case and it could be out of context in this section of the standard.
Discussion on linking to a system ID, DFO could look into this.

It was noted that different regional databases need to talk to other to get data annually, so there would be a good benefit to having this link.

It was asked about the cost to end user all this information had to be transmitted each time. This could be minimized, as an example a license plate on a car links back to the driver, the VIN number and the insurance.It was noted that the Hail out # could be used for everything, but not all fishers have a Hail out #.

It was also asked if default values included auto-password fill-in. It was noted this was the innovative section so it wasn't mandatory but there was caution on autofill that the user must still accept the choice.

16.6 Demo (Trail Module)
It was suggested that a trial demonstration for fishers to submit fictional data would be very useful, especially for training and to prevent false 'live' data.
It was noted by the fishing associations that this was an excellent idea and useful for training 20-30-40 people to try out the software first.
It was noted that there was a similar related issue of a developer 'sand-box' that they could submit trial node information to DFO to test but it would be a trial basis only.

It was noted that this trial software was very important to the northern fisheries.

16.7 Units of Measure

It was suggested that the software could convert to other units, such as kg to pounds (metric to imperial) or local time to UTC time.

It was noted that standard conversion rates are easy to develop (i.e. 2.2. lbs to a kg) but some conversion factors need greater thought. The idea of conversion processing of 'bags; could be variable and set by the fisher themselves, but this might be limited to ease the development.

It was noted that the e-logs is also an approximation, but a table by DFO of 'soft conversion" would be very helpful, especially to establish rounding off values.

This could be under a section called 'non-standard units', e.g., a bag or pan.

It was noted to support what is done in the industry would help the fishers learn and embrace the software. There was discussion about support calls on DFO quota vs FMS units. Most fishers still use lbs or tones.

It was noted that in some fisheries, catch is sold by units other than weight (e.g. pieces for seal, barrel for gaspereau).

16.8 Data Backup

This was noted as an auto-backup feature.

It was recommended to remove the term 'secure'.

It was noted that this also implies hardware limitations too, but that DFO doesn't want the 'dog ate my homework' scenarios.

It was noted to remove 'the protected' removable device.

It was suggested that that data could be put on an unsecure UBS key or stored in the 'cloud'.

It was noted that the easier the software is for the fisher, the harder it is to program the software, that if it looks easy, the developer did their job.

It was asked if the software companies/service providers are required to back up data and provide it to DFO as well, to which the response was no, data to be sent by the fisher to DFO. Comparison was made to phone companies don't collect data sent on the phone or Wi-Fi. It was noted that satellite then would be a cost to data protection.

It was noted that the paper version the books were used by fishers for many years and they kept the carbon copies. These records are important for the fisher to have for their own use (e.g., to track the previous years and correspond to weather data). This would be a key element to sell the software.

Back up is important to DFO, for data security; important for the fish harvester for identifying trends over time.

It was noted that the fisher doesn't care about 'protected data', they won't need encryption on the boat.

It was stated that it is not mandatory for a fisher to protect their own data, that is a personal choice, but the government MUST protect personal data and this section is written from that perspective.

It was noted that retaining the back-up of the log book over time would be done by the application developer, not the communication provider unless there is a decoding element.
If information is lost, ideally fishers would want to get the data back quickly.
It was recommended to strike the last sentence to have a "quick reinstall" on board.
Like saving a word file, you can have a backed up hard drive too.
It was noted that the chain of custody of the data was important: what was sent and what information was received.

16.9 Reports
It was asked if summaries of information can be generated as a report.
It was noted that a 'pdf' may be too specific for the standard, or cite it just as an example.
Excel would also be useful.
Also could data be extracted for excel graphs or mapping software?
It was noted that the header of this section could be changed to reporting and exporting of data.

16.10 Prerequisites
It was noted that the software should define what is required to run the application, such as MB size, CPU size and if this was a requirement for the standard or an option.
It was noted that this might change frequently in the software due to updates. But that the minimum requirements are typical in user agreements of software

10. Certification program of e-logs software

General comments on qualification of the software were presented by Jim Richards of CGSB's Conformity Assessment Division.
He explained that CGSB is part of Public Works and Government Services Canada with two divisions, one that develops standards and one that provides conformity assessment services. Conformity assessments are either qualification programs or certification programs.
For example flash-fire equipment is certified each year whereas the at sea program is a qualification program.
For a qualification program, a standard is developed and then given to conformity. A Technical Advisory Committee (TAC committee) of users, developers, in this case software developers works together to determine the program.
What this committee does is to assess that the products meet the requirements of the standard and a manual of what is exactly required to do the qualification.

It was noted that a qualification system could take 6 to 12 months to set up, depending on complexity.
It was asked how long does a test take and what is the cost. Jim Richards responded that CGSB operates on a cost-recovery, –not-for-profit basis, however this is not a 'free' process. This will likely be a cost for the software companies, though the costs are often passed on to the users.

It was noted that the cost of dock-side monitoring was approximately $500 just for application and review, and then it was approximately $197 an hour.

The Chair clarified that CGSB had not been selected to provide the certification/ qualification process, but was here to explain what a scenario might look like.

It was asked what is certified, the software or is it done form by form.

There was concern raised about the cost of the certification, the time of the process and the cost for 160 fishers to absorb custom software and a 6 month certification process at approximately $200 an hour. This is a custom software with a limited market.

Qualification of software could be complex: what is often required is testing of a few scenarios to test a fair range of possibilities.

It was noted that for this cost is paramount, so testing could be limited to a few scenarios of each form and a checklist of the XML file at the end.

It was asked what happens if DFO fails its own testing. It was responded that this is why an open hub set up for testing is needed.

It was discussed that DFO should express the minimum requirements to ensure affordability and what works best for development and the ability to do the testing at DFO
The onus was not only on the software developer but also on DFO to ensure the software works.
It was noted that qualification was to ensure and protect the fisher, the software companies and DFO and it needs to be efficient. It could be that once it is set up/validated by the committee, it could be a 5 minute test that is run.

It was reminded that this is software to track the catching of fish not health and safety information. It was noted that qualification could have cycle of 3-5 years or could be required for each major version.

It was noted that everyone wants the right solution at a low cost.
It was asked what the current e-logs require for qualification, and does this work or not.

It was asked if a qualification process was important at all. It was noted that the software either works or it doesn't work.

It was noted that the software does require certification everyone's protection but this need not be expensive. It was noted that test in a testing hub could suffice. It was also noted that the data sent in the format is a test in of itself.

It was noted that e-logs software choices will be limited, for example, compared to word processing software options.

There was discussion that e-logs pilots already exist and have simple checklists to check the software.

It was noted that if cost of certification is too high the smaller developers may not stay in the development of this type of software.

There was discussion on VMS. It was noted that the VMS units are not certified but 'approved for use'. It was also noted that the VMS specifications are currently under review at DFO.

It was asked how many e-log pilots are in existence right now. It was noted that there are 18 e-logs on the West Coast, and DFO covers some of the cost to ensure the software works with DFO, contributes to protecting a Canadian resource. It was noted that these pilots work and have been paid for by DFO, shouldn't start from scratch.

There was discussion on protecting Canadian interests of the pilot software. However DFO spoke that Canadian interests are important as are the costs of the Department, however there is no prohibition that only Canadian companies can develop e-logs software.

It was noted that DFO and fishers don't want to pay for "Cadillac" version only because it is Canadian.

It was noted that everyone wants the existing software to qualify to this document and move forward and ideally that the software would be a reasonable balance between needs and costs.

It was asked what the schedule for the roll out of the software would be. It was noted that this has been discussed for many years and fishers would want swift roll out with minimal costs.

It was asked that if there are 18 e-logs systems which are working and can these be advanced? It was noted that several of these e-logs systems do not transmit data (only 3) and that the new national database is the impetus for a national controlled data input. It was noted that the current pilot software may not meet this standard (yet)..

It was noted that the taxpayers of Canada can't support development of several unique systems so the infrastructure is being put in place for one national system.

There was a review of the schedule for the e-logs Technical Committee: It was noted that it is a tight timeframe and costs factor into this. However the first step is to develop this Standard and to determine what will be feasible.

The schedule in the Terms of Reference (Page 6 Annex A) was agreed upon in principle.
DFO will produce a second draft of the Standard in August 2015. Then comments will be added towards a third final draft by the Fall. However all comments received now and in

the future will be made available to everyone. Currently DFO is using email to send out data but there may be a collaboration software made available. There is also public review of the Standard. Goal is October 30th, 2015 but will depend on the number of comments received and addressed.

It was asked if the first software could come out by Spring 2016. This might be possible, would be 6 months after the standard is published.
It was noted that the majority of the standard will likely be set by September 25.

It was noted that public consultations would ideally involve more harvesters. The standard is posted for public comment, and though the door is never fully closed to comment, the Technical Committee will need to deliver its final recommendation to DFO to move the Standard forward.
It was recommended for DFO to meet with stakeholders on this process. It was noted that the e-logs standard and the implementation of e-logs are separate. This Technical Committee will agree on technical aspects. Discussions on implementation will require broader consultations in each fishery/region.

It was noted that the ground fish in British Columbia, it is a condition of license to have e-logs working, so don't break what is working. It was noted that there are no new pilots or funding for pilots in British Columbia at this time. It was also noted that many fisheries still aren't ready for e-logs.
The Chair stated that the roll out had to be determined still but it is unlikely to be done on short notice, e-logs will be implemented when fisheries are ready.

It was asked if the national XML database was ready to receive data yet. It was noted that yes, it is ready and bridges to regional systems will soon be ready.

It was asked if this project could be derailed. It was noted that it was a phased in implementation approach and that the costs saving were seen as important, so although there is no fixed timeline, there is no turning back.
It was noted by the Chair that this meeting and work with software developers was done in good faith and DFO was doing it with intent to move forward and this standard will be a good indicator. DFO has been given the go-ahead to move forward on e-logs, this is in the Department's announcements.

It was noted that a long term implementation schedule will be developed and that the standard is a good start. It was noted that small-scale fisheries may not work initially so DFO will develop a schedule and share this with all stakeholders.

Melanie Giffin noted that cost is the biggest issue with this process, not just for fishers but also for software developers. They want to get a fair return on investment. It was noted that yes DFO will save money, and the software companies will make money. So it is the fisher who might ultimately pay. This may be for hardware, software, transmission, cell service, support, training and data backup. It will be a big bill on fishers and they want to

agree to e-logs but if it is forced and not voluntary with good reasons, there will be resistance. Fishers need to be on-board.

The Chair noted that Affordability is the number one principle in the Standard and there will be benefits. Experience points to costs savings for the Department so this helps defer costs of other programs for fishers. It is here, and looming, but DFO wants this to work as a win-win for everyone. It is a challenge to find solutions, but the paper process can no longer be supported.

Jean Lanteigne noted that he had similar concerns to Melanie Giffin and that this must work for fisheries and there needs to be incentives for fishers to use the software. He noted that this cannot be funded 100% by fishers and there was always help from DFO, in the past. It could be a free product, a free upgrade, a tax credit or other options. This was funded with industry support so need to ensure support of fish harvesters.

It was asked how many boats there are in Canada, and how many fishers as this would impact the cost of the software.

The Chair noted the concerns and ideas and that funding and incentives are the biggest issues for Governments to commit to.

Amos Barkai noted that this process began in 2003 and that it was tested in 2009 so he hopes there isn't another 12 years of consultation. He needs to have a good idea of going forward by the end of September.

The Chair committed to getting more information on the potential for number of clients, better costs estimates and a solid timeline.

It was noted to add training as an important part of Melanie's list. In principle e-logs is a good idea for everyone and implementation of e-logs will be part of the evolution of the fishing industry. It was appreciated that industry was being part of the development and it wasn't 'rammed down anyone's throat'.

It was noted that in one fishery, 6 fishers volunteered to use e-logs the first year, 73 the second year and the entire fleet the 3rd year. The association was involved, especially with training and this was the secret to embarking on e-logs.

It was asked if future members could join this group, including communicating this process with all associations.

It was suggested that DFO work to make more stakeholders aware of this process.

Review

There was a review of sections of the Standard that needed a quick recap.

It was noted that DFO will email out the rough notes that were taken in the last few days as a starting point, in addition to the minutes to come out shortly.

There was discussion that DFO's XML format requirement could cause issues with the size of the coding but there could be conversions of the data to work around this issue.

It was asked when the web-service would be available to test. It was noted that the webservice is available now and testing service will work with the migration of test data in about 1-2 months.

It was asked if transmission costs should be estimated. It was noted that XML will be required for the national repository but DFO would like to see innovation and cost reductions.

It was noted that DFO would provide information on the costs-savings projected by the Department on e-logs, if available.

It was noted that for e-logs pilot project there was a 6 month development of a converter system and that this took a lot of time and costs and would DFO fund this or absorb the cost.
It was noted that the rationale for XML was that it was flexible and works with large amounts of data so XML is the way to go. A flat file was reviewed but XML was selected. DFO can't have 6 regional systems and XML was chosen for the national system. An example of use of XML by NAFO was noted.

Canada's Northern Strategy document was referred to – in particular removal of barriers to people and industry in the north. Explanation would be needed as to why XML was the option selected, despite the cost.

It was asked if there are any examples of XML as current software. It was noted that there was a direct XML program and this didn't work well. There was a CSV to proxy server structure on vessels in Holland and the XML is then compiled.
It was noted the CSV via email on satellite is currently working.

It was noted that this is a small percentage of fisheries that use satellite transmission, for transmission at wharf this is not an issue. Issue with using XML at sea or in very remote locations will be reviewed.

The Chair then opened the floor to other business.

Gaëlle Lemay asked about specific examples of scenarios where fishers would be fishing in more than one region, such as license holders in the Gulf in Quebec. Cédric Arseneau spoke on the scenarios that are captured and accessing data from the region to region should not change the processes. But that diagrams and pictures of these differences would be welcome for stakeholder review.

Jean Lanteigne said that he didn't want to give an impression of being not in favour of the system. He thinks there is full support of members as the way to go forward but it must be affordable and efficient. He agreed that more consultation is needed with fishers as soon as possible, especially for those identified for early implementation. He said there will be complications but that creative solutions are needed and fishers are good and willing to be part of the solution.

Amos Barkai noted that he downloaded a daily EU report in under one kilobyte of data not compressed, so cell service not an issue for data. He noted the collaborative nature of the members and it was very nice to experience how extremely productive and nice members were.

John Blyth on webex asked who to send technical information to which it was confirmed to Cédric Arseneau.

Leonard Leblanc noted that he found the meeting to be very informative and the Chair allowed for good discussion and Cédric Arseneau did a very good job as well. Other members were also very prepared. It was an excellent bridge to learn about perspectives, and the meeting was a good format to get information.

Jean Coté spoke that he was very happy to see where this committee ended up to day He said that he first worked on e-logs in 2010 and now it seemed like DFO was catching up to the Gaspésie. However much of the fleet in Canada isn't there yet but this meeting seemed to be the right path to get there. When the standard is more established, the process will roll out well. He noted that fishers must always be the first priority.

Cédric Arseneau was glad to get the participation of so many for a three day meeting. Thanks to all that attended and those on the teleconference/Webex. The information will be shared in a transparent manner and if there are any issues or comments please call or write Cédric or Gaétan Gauthier.

John Blyth spoke that he was involved in the original e-logs pilot project and he had wished he had been at the meeting in person but he is happy to see the pilot now going to production.

The Chair thanked Lisa Robichaud, Cédric Arseneau and Gaétan Gauthier for their excellent preparation. He thanked CGSB for helping the meeting and the interpreter, Valier Santerre, for his work. He thanked the people on the phone for their patience with the technical challenges and all participants for their contributions. He stated that it was a very productive meeting, good experiences around the table were shared and he looks forward to future discussions.
