

# DATA EXCHANGE SUMMIT 2016

## SUMMARIZED NOTES (MORE OR LESS)

Tuesday, October 18

### DATA MANAGEMENT COMMITTEE OVERVIEW AND PRIORITIES

See PowerPoint for DMC Presentation

1. 2016 is a transition year for the DMC and the Summit
2. The evolution:
  - a. Year 1 - got together to do disposable prototype demos
  - b. Year 2 – became known as IRWIN Summit
  - c. Year 3 – the Data Exchange Summit as this is not just about IRWIN, but the community as a whole and what we want to happen from a business perspective
    - i. Intent is to gain clarity now and between integration testing in late January so the collective understands what will be released in V4
    - ii. Look at the bigger picture and where we will be going
3. [DMC](#) is chartered under NWCG and has stewardship for IRWIN
  - a. See the DMC link above for more information on the committee, subcommittees, current objectives, and publications
  - b. The committee is young and has only had three face to face meetings
  - c. DMC works with the business and straddles the space between NWCG and WFIT – though the ground remains “squishy” on how the relationship works
    - i. NWCG leadership has provided clear guidance, though things will continue to evolve
    - ii. [DMC Subgroups](#)
    - iii. Master charter for NWCG may be found at the NWCG website
    - iv. [NWCG website](#)
    - v. Know who your rep is and let them know your issues and concerns
4. DMC Priorities
  - a. In light of some recent experiences with WFIT and FMB – the FOR App
  - b. Begin with the end in mind and capture the questions that need to be answered
  - c. Priority 1 - Interagency Data Cache (formerly called the repository)
    - i. Community wants to get the same answer of the data
    - ii. Define data sets and reference data
    - iii. Plan for legacy data transfer
    - iv. Now called the Cache because it was felt that this relayed the picture of what it would be doing to management understanding the ICS structure – it is understood that this Cache is not the same use of the word cache by an IT person

- v. What it means for the DMC to be the steward of the cache:
    - 1. Develop the requirements for the cache, not the technical solution
- 5. Data Logic Model
  - a. Mary Sommer, Laura Barrett, Skip Edel, and Steve Larrabee
  - b. Looking at the data, put in data logic model, iterative process to build out
  - c. Create a common vision and understanding
  - d. Define authoritative data sources
  - e. Uses Erwin to create a data dictionary with a data logic model
  - f. Data is really central to how we understand our enterprise environment
  - g. How is it we can create a view of the world, so that when Fire Management goes in and tries to take an application away, they can see the implications
  - h. The Fire Directors and Managers are struggling to understand and the DMC feels we can help them understand the environment
- 6. Data Exchange Model
  - a. \*\*\*ACTION ITEM: Post Data Exchange Model Diagram on NWCG website\*\*\*
  - b. Want to be really clear from a data management perspective, fire does not own the data, it is the agencies that own the data
  - c. Cache intended to bring the data together for a view of fire at a national level
  - d. A single record for each ignition/event – underlying principle of the data cache
  - e. Considerations:
    - i. Be able to link ignitions with outcomes - data related to ignition and data related to outcome – two different things – would be helpful to have them separated and have a many to one relationship
    - ii. We have some assumed awareness around POO and jurisdictional unit - when you get to the end of the fire, you have a whole different set of information than you did at the beginning
    - iii. A different set of information depending on when you look at the fire
    - iv. Point versus perimeter view of the world
  - f. \*\*\*ACTION ITEM: will share the PDF of the data exchange model\*\*\*
  - g. In order for this to work – need good standards and definitions in place
    - i. Define in the glossary and apply to standards
    - ii. There are data elements that should always come together in groups, ex. Lat, long, datum - “Data packages”
- 7. Data Management Plan
  - a. DISAA – data, infrastructure, security, acquisitions, applications
  - b. New potential subgroup of the DMC – provide a technical voice to WFIT
- 8. Public Data, Slow Data, Real-time Data
  - a. A task group was formed to look at the data we exchange and what can be accessible to the public.
    - i. Would that be a longstanding working group?
    - ii. Or will it be under the new subcommittee?
  - b. “slow data” – we may know how many homes burned, but we may not want to release as soon as we know it, we may want to wait a period of time before that is made public
    - i. ex. IRWIN team worked with DOI OCIOs office – worked to release five pieces of data for drone operators via a service – a number of other folks have glommed on to this

- ii. first time data has been made accessible to the public real time

## DATA EXCHANGE METRICS

Some of the conversation below relates specifically to the metrics displayed, while topics that may seem to diverge, those were raised as a result of metrics.

1. Validation – this is where the data cache comes in – since it would point to authoritative sources – ex. layers for Unit IDs – all systems would be validating against the same data set
2. Some of the applications put in validations before even going to IRWIN and that would have lessened the issues
3. Question: should validation occur at the system level or the exchange level?
  - a. each system will validate at its own internal purposes, but applying NWCG data standards, seems a little weird that we even expect it of the applications
  - b. validation at one central place – efficiency
  - c. let’s think outside the box...ex. IROC not have lat/long, but when print resource order it has it because it went out and got it via the GUID
4. Public facing systems using IRWIN data: EGP, GeoMac, DOI Geoplatform, Wildfires Near Me app, Smartfire
5. Thing thought about with FFR systems – whole FFR approval thing – trying to get it figured out – original thought was, once those came online, we are going to want them to write data back to the CADs
6. If structure the data cache right, move the reporting capability to the cache and away from the individual applications
7. Changes the way we have to think about the FFR data being updated – cleans it up a little...But right now we have two different paths and two different numbers
8. Conflicts that were detected...all that will be coming to a theatre near you
9. Need to separate hard validation versus passive detection (Reactor)
  - a. Hard validation – stop data
  - b. Passive detection – hey, this might be an issue
10. Is it technology or a training issue?

## MERGED FIRES AND INCIDENT COMPLEXES

After a very active 2015 fire season and the NWCG Executive Board tasked the DMC to facilitate a task group to develop common guidance for reporting incident complexes and merged wildfires. Last October a group of 26 individuals representing both federal and state agencies met to develop common guidance for reporting incident complexes in merged Wildfires.

### ***2015 DMC Task Group Recommendations***

#### ***For Incident Complexes:***

1. Adopt FEMA’s term “Incident Complex”.
  - a. An Incident Complex is NOT a wildfire and is not interchangeable with a wildfire record.

2. Update the Event Kind and Category Data Standard to ensure the record is differentiated from a wildfire record.
3. Adopt defined business rules for managing incident complex data.
  - a. A complex incident will have a unique name. Cannot be the same name as a child incident.
4. CAD's and the ICS-209 are the only authoritative sources for creating and maintaining this data.

***For Merged Wildfires:***

1. Defined Merged Wildfires: "A situation that results when two or more wildfires burn together to form one burned area. (Operations and training Committee April 2016).
2. Add Merged Data and Parent data to wildfire records to identify the relationship between two or more incident records.
3. Allow perimeters for merged wildfires to reflect more than one Point of Origin.
4. Enforce business rules for reporting, which eliminates the risk of double-counting acres in operational and historical data sets.
5. CAD's and the ICS-209 are the only authoritative sources for creating and maintaining this data.

***How we used the recommendations identified by the DMC Task Group in 2016:***

Made changes to the 2016 Mobilization Guide on some of the no-brainers:

1. The complex parent is a unique record and is not a converted wildland fire incident record.
2. Will be created in a CAD or an ICS-209.
3. Will include the word "Complex" and not be named from an existing fire.
4. Incidents that do not have a unique IRWIN record cannot be added to the complex using the 'Complex by Incident' button in the 209 application.

Additional changes that were implemented:

- Incident type Complex was created in 209 and WildCAD.

***Successes:***

12 Complexes nationally met Large Fire Criteria in 2016, compared to 55 in 2015.

Most Complexes in 2016 complied with the business rules established in the NMG.

***Failures:***

Dispatch Centers that didn't update their WildCAD populated the incident complexes location at the Idaho State Capital.

4 of the 12 complexes did not follow the new business rules established in the NMG.

***What to expect for 2017:***

***Complexes***

For ICS-209 we are enhancing our complex by incident button and will be with all of the recommendations that came from the Complexes and Mergers task group. Those recommendations are also in the draft NWCG Data Standards for Incident Complexes and Merged Wildfires. Which includes the additional fields:

1. FireCode
2. Residences Destroyed
3. Other Structures Destroyed
4. Fatalities
5. Injuries
6. Estimated Containment Date
7. Percent of Perimeter to be Contained (for non-Full Suppression fires)

### ***Mergers***

Will be creating a merge by incident button that will sit in Block 7 of the 209 application.

The Merge by Incident button will include all of the following recommendations made by the Complex and Mergers Task Group, which will also mirror all of the data fields of the Complex by Incident button.

1. Complex on map – centroid of all child incidents
2. There will not be validation on requiring complex in the name
3. WildCAD will trap if they use the name Complex on a WF and reject them
4. Will be in Mob Guide – per Steve that is where people are going to go
5. Sean Cross thinks the complex guidance should now be a NWCG standard for data management
  - a. Standard and NWCG memo will go to FMB telling them what the applications need to do to adhere to this standard
  - b. FMB about implementing standards in applications
6. The next task group should be looking at WFDSS and 209 and seeing how strategies for specific incidents are different – WFDSS is a published decision
  - a. Morgan Pence did a huge research project comparing decisions in WFDSS versus 209s...
  - b. Trying to figure out best pathway – 209 would like to set the IRWIN ADS for fire suppression strategy from WFDSS
    - i. If go with WFDSS as ADS, there will be a default assumption? Only if WFDSS is in play for that incident, will WFDSS have the ADS, but cannot make default assumptions
    - ii. Need transparency in government
    - iii. WFDSS not wedded to slider bar concept
    - iv. There have been critics of the 209 choices
  - c. Idea of slow data – management strategy, so that ICs are not spending all day answering questions
  - d. Steve – wants the public data group to look at which elements should be slow data

## RELATIONSHIP MATRIX

### Incident Relationships in IRWIN

1. Complexes and Conflicts – currently there
2. From a technical perspective very lightly tied together
  - a. A self-referencing table
  - b. Gets awful confusing
  - c. Got us through three years of this silliness
3. Question if threat fires can be a relationship...?
  - a. Andrew a threat fire without a record in IRWIN would be a special case...one would hope
  - b. A flag in one system that indicates it was a threat fire or not...need interagency agreement
  - c. It all comes down to business rules
4. You would only unmerge because you made a mistake
5. Have to support current capability of systems connected to IRWIN
6. Out of Area Response – garnered a fair amount of discussion
  - a. Steve right on target – from an integration perspective – we have one record per fire and the out of area response is a construct...
  - b. We need to find a more efficient – get the razor out
  - c. What if you read your neighbors incidents?
  - d. Andrew – got a system consuming incidents, put in almost at the same time, now I have to manually untangle one getting in to WFDSS versus not, support order versus WF – once relationship is established, WFDSS can see which one to allow in
  - e. Should read true incidents from the environment
  - f. Beauty of all of this IRWIN stuff – we are building to current today, but we can't forget that we need to build to the future, be prepared to take current to meet the future vision
  - g. Chuck views IROC playing a large role in this out of area response
  - h. Out of area response seems to be a bigger discussion – what do we need it to look like today, and what do we need it to look like in the future
  - i. Are we using the incident and sharing the information?
  - j. Should talk about how ADS plays into two CADs sharing an incident
  - k. There will be data affiliated with the out of area type that is really not good data
  - l. Work that has been done needs to be staked to something
  - m. Out of area response incident data, while interesting, is trivial and should not be considered in any official statistics
  - n. In WFDSS, move the parts that are valid
7. Does holdover need to be a new cause?
  - a. Relationship between two wildfires
  - b. Ex. Funny River Holdover
  - c. It was a new response, a new ignition, but it was related to the original
8. Could the relationship be used to remedy the duplicate incidents?
  - a. Training is problematic
  - b. Where is the IRWIN help desk?
9. There is another type of incident – in support of in support of...
  - a. Do not want to replace SU with OR...feel there needs to be both
  - b. Centers do bring on folks in support

10. Merge happens basically once
11. Out of area response happens once
12. Parts of a relationship
  - a. When did relationships actually occur? And technical synchronization time
  - b. Bare bones requirements of a relationship
  - c. Not all relationships would expire
    - i. When leaving a complex, it would expire the relationship
    - ii. RWIN would enforce the business rules for expiration
  - d. Some nuances to if a merge was created by accident
13. Relationships would be returned as part of the incident
  - a. Link goes both ways – acquire parent get the children, acquire a child and get the parent and other children
  - b. Resource array of attributes
  - c. Insane amount of business logic that needs to go into this still
    - i. Do not have a lot of business rules around this yet – but we have the structure to support the business rules
14. Out of area response makes Steve really nervous
15. Merge is not meant to resolve a conflict --- want that to be clear to the users...Evan now thinking about how to take care of that
16. What does the decision process look like? is it going to be available? Are we going to implement next year?
  - a. For sure complexes are not going in...
  - b. Only Merges and OR are on the table...
  - c. Per Lani, this is not going to be able to be implemented in her systems this year
  - d. Brian will implement some things based on conflict resolution

## DATA EXCHANGE ENVIRONMENTS

See Andrew's PowerPoint

1. Irwint.doi.gov – a source of much debate on where and why systems connect to it
2. How should the future look? This is a conversation not a presentation
3. there will be an IRWIN OAT 4
4. A system can have as many connections as they want to a single environment – what the team chooses to do with it, is on them
  - a. \*\*\*the same credential stays the same and you can use multiple versions of the application\*\*\*
5. The data refresh on OAT was a problem...reiterated multiple times.
  - a. WFDSS connected to development environment in OAT – had expectation that the data would be fairly low volume (even in Prod would not expect 10K records over night)
  - b. Not clear on what the testing period for FOR was going to be
  - c. What is the expectation?
  - d. If we need to test a FOR App, and they want to test against real live data, what do we do?

- i. Evan – would like to introduce an additional application – Impersonator – will be deployed in to OAT and allow development teams to suck Production data into OAT at will
  - 1. Would allow systems, empower them, to take control of the data
  - 2. Are you sure it will be a trickle? – it will be just like any other incident coming in to IRWIN
  - 3. Any incidents created in this manner will be done at the user level

## EXPECTATIONS

- 1. WFDSS training is not connected to OAT – do we owe our users an environment?
- 2. EGP as read-only, they occasionally hook up, but they do not have a separate training environment
- 3. elsuite available to project team; elsuite training is to OAT
- 4. training should not go to production
- 5. Brian – truth is, training version not connected to IRWIN
- 6. Bighorn office folks connect to OAT
- 7. In WFDSS, developers hooked up to OAT
  - a. If open up training...

Evan likes this conversation –

- 1. IRWIN test has never been guaranteed to have any up time at all – it is the IRWIN team’s functional testing environment – stability – incidents will come and go
  - a. If it is needed, we should have conversation about which
  - b. Opinion - Should only used during an integration testing over the phone – one on one
- 2. OAT horsepower is the same as Production
- 3. Performance testing could be done on OAT
- 4. If hammer OAT and it doesn’t go down and passes all the data
- 5. Parameters: can it meet the performance measures of your application?
- 6. The capacity of IRWIN is the community – we are only as strong as the weakest link
- 7. Development environment is internal to Esri
- 8. Test – could be used for extended team developers or it should only special for one on one (always meant to be a development environment)
- 9. OAT – open for staging, training – meant to be a stable environment
- 10. Intermediate environment between development and production – good product for OAT
  - a. So no fair loading all production data into OAT all at one time...reiterated, again.
- 11. Test is up all the time, but we do not guarantee the service – have made notifications to community on OAT
- 12. Take home – what do we need to change from development perspective?
- 13. Test a conversation – definitely been there to support the extended team developers
- 14. \*\*Expectation: IRWIN can do whatever they want in Test, but OAT can be wiped if needed, but no mass loads, and let the process rebuild itself...\*\*
- 15. Business rules around expiring incidents have not been fleshed out...if that conversation were figured out, we could keep OAT nice and tidy...
- 16. Evan – would like to run down impersonator route and allow the community to self serve – he does not want the IRWIN development team to be a hindrance

## ADDITIONAL CONVERSATION

1. Terminology: What we call it (the application)– test, training...
  - a. It is contractual language
  - b. Maybe go to WFIT SOPs?
2. Only production should go to production
3. Could make recommendation that we see it as a problem?
4. Each of the application environments should have a training environment hooked to IRWIN?
  - a. Depends on what you are trying to do...some opinions
5. Would be nice if full suite connected as in production in OAT...
6. What is the training environment set up to do? Does it meet the mission?
7. As a recommendation, Andrew will take that back – make WFDSS Training talk to IRWIN OAT
8. \*\*\*What every system names their internal environment and what they talk to...Evan create a survey...so we know who talks to what\*\*\*
9. Definitely consternation over the data dump in OAT this year
10. Current number of IRWIN environments acceptable

## IRWIN CONSOLE – REACTOR

See slides

1. What is Reactor – another complement of IRWIN (API), Console (user facing components)
2. Want to build out Console
3. Reactor has become a multi-headed monster – want to surface issues
4. WFDSS has done a really good job of this

An ambient processing engine that will:

1. Try to find all users and notify issues of them as they occur
2. Community build set of data issues
3. Things that cannot be captured with hard validation, ex. Conflicts – want to surface potential issues
4. Complexes that look like complexes, but have not been input as complexes
5. Issues – surface those out
  - a. Feel ashamed every time WFDSS points out an issue
6. Another aspect, providing a notification message/alerts
7. Be able to receive the notifications as reports or emails
8. Third, more of a development aspect, automatically cross reference data in the IRWIN store – and data used for look-ups – would like to be able to have sources for all of those so we can have them as changes occur – us trying to lift mountains without a lot of personnel
9. There could be the potential to tie notifications into the filters –as the data comes into IRWIN it could notify based on the filters
10. Currently a scalability issue - In response to Steve asking if he could be notified when a 209 is submitted
11. The hope is to have a source for the referential data identified – another use case for the data cache

- a. Currently read the Unit ID by hand
- 12. Would like to deliver something by version 4
- 13. Andrew –there are some other applications that are sending notifications out that are data driven – do not feel this a duplication, but think there needs to be communication
- 14. Lift is actually pretty light after DOI IT folks create the IRWIN no reply email
- 15. How much do you think the Console audience would grow?
  - a. Currently have 700 users on Console
  - b. Steve feels there would be a growth in that number as this would hold some appeal
  - c. We (the IRWIN infrastructure) are okay for that
    - i. Leveraging of the console infrastructure is really light –really it is about building out the tools to support it
  - d. Hope is that if there is growth, Reactor will help facilitate the administration of users

## REFLECTIONS ON THE DAY

Mike – fly on the wall

Wendell – interesting to see how the merges and complexes played out – looking forward to seeing that evolve

Keith – just noticed as moving forward with integration, we can now effect the ways that businesses do business – look retrospectively back

Don – I missed what he said

Clauzell – learned a lot, just trying to get to a common theme and terminology – can be tough

Andrew – always appreciate the discussion and the audience we get for this meeting, not the DMC, straight business reps from national level, appreciate the technical folks here, still unsure how we take leanings forward, how will we translate the discussion and consensus forward to actually having decisions

Brian Collins – love the exploration that we do, how we manage the expectations, and the cascading effects, up till now it has been a small group working together → IRWIN → now the community wants it and how do we move forward, who pays for it...the good and bad, get so excited, and the evil programmatic side asks how do we do that

Mary – like Evan’s presentation on merging and complexing, learned about IRWIN today

Jerry – always better to be here in person than on the phone, been good and information, glad Chuck got to see him again

Mary T – especially interested in merging and complexing from ROSS, nice to see work being done, we are with Chuck, would love to see complexing gone

Terri – day filled with lots of good information, agree better to be in person, agree no complexes

Shannon – learning, listening, - great learning glad to be here

Marely – like the discussion on data cache, excited for that, will help out there application, cleaning up data standards, unit ids, instead of hand cranking, being able to pull from a source would be nice

Cameron – still educational, trying to – nebulous on how going to service final fire reporting systems –get his head around how to help FMIS and WFMI – has questions jotted down, want to talk more about FFR

Jill – great to put names to faces – room has been a little hot this afternoon – interested to see more about how WFIT is going to play a part moving forward? Stumbling block? Being in yesterdays meeting – since immediately involved in EGP, how are they going to play well with other and benefit from others input

Kris – need trifocals to do this meeting, want to encourage the team, IRWIN has a great mission, and make sure we don't lose track of long term mission while working on the stepping stones; worried about IRWIN becoming a data warehouse, lets help drive a common mission – it does impact end system; whose going to pay for it...

Lani – as managing expectations – we are just a small team – all about managing expectations, small team of two devoted to four applications...

Brian – good job on presentations today, discussion good, highlight was learning new things about GaBriella

Steve – started this day and spent first hour and spent the first hour typing the same information into WFMI; always appreciate the willingness of the application people to make this work; kind of getting a better strategy on how to manage this data; thank you Roshelle for the humane lunch start and stop?

Kris – happy to hear DMC is focusing attention on standards and practices – parameters for data management will help determine if successful when getting data sources to agree; glad that he made it through as sole CA rep without too many bullets

Jill – learned a lot today, interested to see how e-Isuite can become more more involved

Kevin – don't feel like beating anyone up; having some experience out, some interesting things about merging incident data and resources, right now e-Isuite pulls in very little; interesting to how that develops

Cole – first Summit, really interesting afternoon; more about IRWIN, enjoyed the stats section, raised some interesting conversation and yes to the data cache,

Marsha – would make the comment that she has only been out of fire for two years and either she has purged all acronyms out of her mind, or else we came up with more acronyms; support Chuck in quest to get rid of complexes; echo Andrew, and lack of decisions

Craig – what she said; like decisions, want to hear this is a great idea, lets do it; hope consensus translates into direction

Evan- thankful for the conversations – Andrew leading ambiguity across environments, which systems is statusing what in IRWIN, really good discussion on relationship types, know there will be continued good discussion ; great to be able to present some of this and have discussion outside of cubicles.

Diana – think this meeting is important – come in here and learn where you are with objects and woes, maybe we can collaborate, hope we can keep this gathering up

Roshelle – think you all are awesome; sorry had to bug out, can't express appreciation for each of us here; think that speaks to the maturing of this community as a whole, this vision has become so clear that there are multiple people that can stand and move it forward

Wednesday, October 19

## RECAP OF DAY 1 BY STEVE LARRABEE

Because I don't speak this nerdiest language, yet...Roshelle started out talking on behalf of DMC. The #1 priority is the data cache - details to be determined – emerged as a bit of urgent business. What could have been a mind numbing presentation on metrics – but we loved it – and knew we were in a room full of nerds. Steve noted some things to work on, other developments – the other questions folks had regarding metrics. Sean P. spoke about the Complexes and Mergers Guidance to be issued. He described some of the work to be done in preparation for that; guidance in mob guide to be retained. May go in to 2017 Red Book – make it policy. Expect enhancements to 209 per that guidance. There will be work to be done by other applications, something about the Management strategy slider bar in WFDSS. Next we talked about the Relationship matrix. Currently two kinds (of incident relationship) in IRWIN, but there are others we have realized. Other types: complexes, out of area responses, merged wildfires. Complexes not implemented in 2017 – can't just pull the trigger on that as we have contract language etc. Discussed the Data Exchange Environments; four IRWIN environments: Development, Test, OAT, and Production. Only connect Production environments to Production. OAT should mirror the kinds of activity and behavior of Production – don't go do big data loads. Console/Reactor – will do three things: Help find issues, validation problems; Notification component; Allow IRWIN to update referential data. Expect Console user base to grow.

## IROC UPDATE

1. Not a lot of information
2. Rumor control – a story that a component of IROC to build the data cache...**not true.**
3. A resource inventory – built in
4. Organizational structure – refreshing that data
5. Modular approach moving in to the record
6. May know more in late November...
7. Five month hard fast run building this box and then a two year time until Production
8. Big push for DMC – Mary spent lots of time mapping with Bill and Gina

## INITIAL RESPONSE RESOURCE AND DRAFT EXPERIENCE RECORD PROTOTYPE

What started out as a conversation between IRWIN and IQCS and IQS regarding reading incident data, turned into a large prototyping effort. Any individual can currently go in and enter incident information – made it hard to check for incidents and requiring a lot of rekeying of incident data information. Decided to dig deeper to create a draft experience record and it became clear that you could not get draft experience record without knowing what the resource was doing.

Roshelle summarized the initial meeting, held in June of 2016 amongst many applications and stakeholders representing the business, focused on discovery of initial response resources and what kinds of information is needed to answer a variety of resource related questions. Going to see a lot of components that have been identified as important to create this draft experience record:

- Uniqueness
- Availability
- Capability

- Financial Authority

Current method includes a large amount of workload and paper – would like it to be more automated. Big gaps for the states were that many resources were in CAD and not in ROSS. Prototype has gone in with the assumption there is a clean slate – a lot of this can inform how IROC relates to the CADs. Want to use this at NICC to look at drawdown rates. Also want to know the number of resources that really exist – and not an inflated number because of duplicates.

Fun random tidbits gleaned from Evan shuffling code around in front of everyone at a rapid rate of speed:

- \*\*\*In data cache – 310-1 and position naming board\*\*\*
- all resources will have a spatial component
- relationship created between the parent resource and the children (ex. Roster)
- unique identifiers galore! Experience, resource, incident
- self service experience management in draft mode
- \*\*\*enhancement – user be able to upload documentation when verifying experience\*\*\*
  - where will those documents be stored?
  - Documentation from an evaluation on an assignment – ability to upload
- \*\*\*Chuck and Kara need feedback on how to get clearer on statusing\*\*\*
- need to sit down and chomp down through the levels – ex. Strike team
- financial authority is a key piece of this for the Feds
- how do we get the resource from CAD to data exchange environment? This is where the focus will be this year....expectation is that no one will read those yet – more of an observation period
- multiple inventories – overhead and equipment
  - IQS - inventory of people
  - IROC – inventory of equipment
- Rostering – think of it instead as Roll Call, per Craig and Chuck
- Not expecting human beings this year on equipment – no one will be ready with rosters
- Chuck – IROC in time will be the tie it up together
- Authoritative sources – go down as far as a state’s maintenance system that keeps track of (equipment inventory systems → national wildland fire inventory)
- Current expectation – as discovering and trying to learn – want to be learning the parts and pieces – would just rely on the current inventories in CADs already – as we try to get the structure in place
- VIPR would own a ton of stuff too
- Want to get from authoritative source and into a single inventory to use...

## INTEGRATION TESTING PRIORITIES

- WIRS testing (FirResponse)
- Some counties will be part of testing – LA County
- Emergency Reporting – subscription service for fire departments to track resources and fire calls – NFRS reporting – looking at how to tie in for the WF part
- Working with ND and WY to integrate with IRWIN
- One application testing, but a lot of data (see above)

- Does WA DNR use Emergency Reporting? Question from Brian Booher
- There are states that would be fully covered if Emergency Response comes on
- Brian from Interra – when is IRWIN ready for all the small local CADs to come on?
  - Need more discussion
- Any system that filters by application needs to be aware of any new applications that came on
- Want to make sure states have time to figure out how the process is going to work
- If the business is comfortable that it will be possible, then the data exchange environment has the patterns in place to work with it
- Andrew Bailey and Unit IDs – we have a precedent out there with IFM and FireBeans

What is potentially new:

- Will follow established patterns – those are going to remain consistent, but there may be more sources
- Incident creation and fire reporting
- Keith’s goal is to eliminate the FTP site for NASF and it has to come through IRWIN and use the data cache instead
- With FOR App we have an established pattern for smaller state systems to come online
- Chuck is available to do that (I’m not sure what “that” was supposed to be...GB note 11/10)

Integration testing:

- Starts with moving incidents
- Expect a lot of testing around complexes – a good half day
- Changes made to 209 are going to be big to test
- WildCAD enhancements around complexes
- Three sources for the creation of complexes – WildCAD, 209, and WIRS
- Be able to create and read as we expect
- WildCAD will implement the relationship matrix to complexes
- Merged fires...
  - Firestat won’t add – simply in comments – need a stable system first
  - What is the geospatial subcommittee perspective on that?
  - WFDSS needs to figure out how to handle
  - Is IRWIN going to set the out date for the merged fire? Could...
  - \*\*\*need to do more checking on this as a community\*\*\*
  - need to know impact on perimeters and fire reporting systems
  - BLM adopted the guidance from the memos
- Where have we had problems this year that we need to test?
- ICBS still not accepting incident numbers that revert back to original\*\*\*check with Andy Gray
- For incident complexes – two new methods
  - GetUpdates will contain the relationships
  - \*\*\*On statistics that Craig showed, a filter should be complexes vs wildfires (exclude complexes)\*\*\*
  - complexes currently in the API
  - trick here is if the system sits on version 3 can still acquire old method, but if switch to v4, then would use new method
  - will do a mask of v3

- what needs to happen – the tech guys need to have a discussion tomorrow, what are the implications, what are the changes the applications would need to make for incident complexes
- any system that cares about complexes would have to adjust
- \*\*\*Mike Roadifer would like a document displaying the relationship matrix – Evan says it will be more in depth than the one currently out on the LLC site (enhancement doc)
  - Will put together a doc after tomorrows discussion that will lay out all the methods in more detail\*\*\*
- \*\*\*Need decision from extended teams by end of the month\*\*\*
- \*\*\*Need further conversation about business rules on SU and OR\*\*\*
- Anticipate in integration testing that we will want to test these two types and they are flowing as expected and applications are reading as expected
- OR – in an interconnected world why do we need it? In a perfect world, if you knew the incident you were sending your resources to, you would not need an additional incident, but OR is the result of conflict resolution.

**Which led to the following additional discussion on OR:**

Evan - The very process that we are using, it just should be standard conflict resolution, get rid of the bad record and point to the correct one - Feels like we are currently counter

Roshelle – get rid of that paradigm...a record does not necessarily mean an ignition

Evan - Establishing an OR is representing two records for one ignition because they are currently going in to an incident table – an incident referencing another incident – doesn't feel like he is explaining himself very well. Either going to have to put the normalization on the client or write code in IRWIN...

In Roshelle's mind – the ignition record is the parent and the OR is the child

An interim step in between - Parent child relationship - There will be two IRWIN IDs.

If IRR inventory comes online, when we do summation of resources on the parent, will have to determine if there is a child and then reach out and check the resources on those children

Evan – it feels wrong, but I will write the code. It would feel right, if we had...Unless we call OR a different entity – an OR could be a child entity type of an incident – but going to stop there...And then the business logic – in this fantasy of mine – the business logic we just discussed would be so much more simple and clean and logical

FMIS from a demo per Diana – open up a service to select a fire and then tell it what you want to associate with it

One record for each ignition – but there could be multiple record types attached to an ignition

\*\*\*is there a better way to structure our organizational relationships?\*\*\*

Use OR to identify a record that has been identified as a conflict. Record in conflict goes to OR and goes to isValid=false. Deactivate the losing record. If in IRWIN we can search the inventory and move the resources from the “losers” to the winner.

Shannon and Terri talk to John...one FireCode needs to be made invalid...invalid false does not deactivate the firecode at this point, but it works the other way

\*\*\*will line out how the ORs will/may impact read only systems\*\*\*

With the technical conversation – all types of relationships will move to that ideally. Why were conflicts not in that?

### **More on Initial Response Resources**

Awareness – want to start the learning process for all the demo/prototype – huge dependencies on IROC, and changes with IQCS and IQS, self-service app...a lot that goes in to fully implementing

The area we do not know about are these initial response resources

Want to see CADs send resource data to IRWIN, but not go anywhere else

Want to spend time testing and watch and see what is happening, and would not want anyone reading and doing anything with it

Trying to learn about IRR...want to see what it will look like in the data

We can think of the way it is supposed to work and we have users out there who have interesting ways of doing it

### **When are we going to talk about spatial data, say fire perimeters?**

GSC has tried to tackle it, but they have not been ready for the conversation

Start small with just agency reps of GSC – probably need to get a C&G...need to look at ADS

Different places in the life cycle

Couple things coming

Know a couple of the states, through EGP, and the collector app, GeoMAC still there

What does this even look like?

Andrew would like it to get back on the GSC plate again

Diana says we are ready for it...need to start moving and not put it off...go to NWCG executive board

Jill – will we not hear the same response – you don't have anywhere to put it...

Andrew – does not disagree – but feels that IRWIN has been successful (led to update on Data Cache below)

Andrew supports \*\*\*November meeting is November 9...of GSC, putting on the agenda\*\*\*

\*\*GSC will readdress perimeters\*\*\* Andrew may talk to Chuck/Craig about

Even if we have a data cache, we need to get the stuff in there

Make sure conflict resolution is updated...to set isValid to false

Question from Andrew – are any systems interested in perimeters?

- Brian from Interra – yes...don't care who owns it
- WIRS would use it
- IFM would want it

## UPDATE TO BRIEF NWCG EB FOR DATA CACHE

Executive Board had been briefed in June – giving awareness. Since then, had the concept of repository/data cache swirling around. Data and data organization coming out as number one need in all of the current projects – fuels, IROC. DMC took it back to NWCG and said now we know we are on to something, needs to get to FMB because we know what we want.

Presentation – this was a great idea, we need to do this, then got churning on, what is the process...

Things have been coming in at FMB level....then handing to NWCG to then task a committee, but we are doing it the other way...

NWCG cannot provide IT support...or give a tasking to IT...a few moments of shared panic between the folks presenting and they can't get unstuck from process

A few folks spoke up, we know the process is done, but we need to get this done

NWCG would like to see the all the projects and prioritize

They (NWCG) are going to request FMB to provide a tasking to get a project manager

Will present to FMB next month – same presentation – Sean Cross and the chair John Glenn will be attending to back up the group, asking for it to be a priority project with the IT resources needed to get started

It was good, it was frustrating, it was everything an executive meeting would be

Nodding heads around the room

## LARGE FIRE REVIEW PRODUCTS FROM RD&A

See PowerPoint

Fire reviews – at the end of the year there are a number of efforts to look at fires over the year and learn things

FS different levels of inquiries

RD&A got pulled in through Morgan as an analyst

She did such a good job on the R6 that when came time for R3 they asked RD&A

Intent is to learn and improve and understand

No longer counting beans, but looking at the important decisions made

The FS assigned to the review – have a set of criteria

As an analyst, document hound to help the team doing the review

Not actually involved in the review

See list on the slide

Have some calculated metrics also included

Can now use IRWIN to get the data from 209, instead of going document by document

The information in WFDSS is used --- maybe become something exchange, but not making a request for that yet

A lot of digging on the FTP site...

Hard to find on FTP site, and may or may not be password protected, which require someone to hunt down the person to get in the folder (particularly public facing password protected)

Andrew likes the idea of being able to connect to elsuite and pull in the relevant parts

Fire Timeline Graphs using IRWIN

Even with the data above the line pulled from IRWIN, it took 8 hours to create this graph

This is not possible without IRWIN, you are relying on people to read the context

A lot of what Andrew does is standards – this time he actually got to play with the new stuff

Moving away from manual – R3 example – had a week to turn around a product (Andrew and Ben Butler, he is a bit of a geek)

Used the google charts API – took 8 hours to do four fires total

Didn't turn quite the same package, but the NIMO team appreciated it and did not have any questions

RD&A perspective – we don't know what they need – they do not know what they need

Could build some of this capability on top of the data cache...

Not trying to put the analysts out of business, but let's do something more interesting

What's next?

As continue RD&A and tech transfer – make more automated

Go into Observer, loaded CSV into Google sheets

Reggie was looking at automating the big graph that Morgan did

All the stuff in the RISC console – Reggie already has an API for it

If people want data in WFDSS that should be pushed to the community, if there is a need, then we should do that

Put all this stuff in a data cache and it becomes trivial to do this for any fire

If worried about the number of fires, make available...

Brian – what is the cycle of researcher, product development...how stable are the outputs of putting the metrics...

Moving target per Laura

The RISC stuff – mashes up some of the metrics from different places and has its own display and way of displaying

Are we doing this the right way?

Should we let something else do the mashing and something else do the visualization?

R6 – their analyst – did all kinds of analysis...and it was hard to get the MAC group to appreciate and use the products because they were used to their old stuff...

Kara was supposed to talk about Great Basin products – imagine that this is a small portion of the data in the environment, with the data cache concept, the type of analytics we could do, could have some huge impact

Give us great perspective on what we are doing

## MORE METRICS

Craig presented another PowerPoint of metrics addressing folks questions from yesterday. Updated PowerPoint on LLC.

## THOUGHTS ON THE DAY (30/10)

Cole – glad made it today after meeting with Andrew; enjoyed Evan’s presentation and the rest end points and the data flowing

Jill – did not like the metrics, but until can prove herself, does not trust them; like the brief overview of what is happening; hopeful for the future, and hope things happen sooner

Marsha – appreciate chatting with people and seeing how different folks are using the IRWIN output, and will probably be the future of where we go

Diana – cool to see reporting products – potential to generate – going to counter Jill, I think we are going to get there – feels like the meeting is gelling like the DMC

Kris – another good day, struggle to keep up with the technical side, graph by Andrew caught his attention, bring functionality back to department

Jill L – good to hear all the discussion

Kevin – interesting from an elsuite perspective; training specialist module might be able to provide some input later, heard IAP – good meeting – look forward to integrating data down the road

Brian – appreciated discussion on integrated testing and could have had lists on the screen – look forward to the follow up plan

Paul – love the very non-technical can-do projection screen (white sheet on the wall) made really good progress this morning...with NWCG and the data cache concept, otherwise may have been here more

Terri – ditto yesterday – good information – since involved with year 1, how different these meetings have matured...good back then, bumpy, new concept, really really good; thinking back then to now

Shannon – loved the whole demonstration with IQS, ideas of things that may come with IQCS, did invite IQCS developers tomorrow – John J on board, but has not been able to help much with that yet...currently unable to attend tomorrow

Marley – good day, glad here, know application not hooked up yet...good to sit in the room and talk about the exchanges in data

Laura – good to see how to help with training, as business leads, answer questions; could all improve on the training, seeing the end products, is why they give us any money at all, if we can show what we are doing the better off

Don – dug the icon for Impersonator; liked the metrics

Clauzell – has been excellent – need to get the rest of his tech team in the room and part of the conversation

Andrew – appreciate the group of people; not the folks in DMC, not in RD&A, we all speak a language of data, appreciate open mindedness , enjoy the week , look forward to tomorrow and where we really going

Mary – missed having white boards – would have enjoyed writing – this conference room comfortable and worked well

Mary – especially enjoyed the IQCS discussion, excited about that – from ROSS waited for so long – liked Andrew’s presentation; hear what is going on

Jerry – being a process person, does the process make the job easier for the user, being here has given him more insight and better information on what IRWIN is about, and the programs feeding Irwin and how it will be better, been a very good meeting

Evan – real excited about all the products being generated by the data from IRWIN – Andrews graphs, Craig and Alex metrics, G – really awesome - in a room and discuss the future of the data integration – good to re-sync, discussing future features, prototypes

Craig – want integration testing with IQCS, and ensuite, talking about all these really awesome things they have, don't know what the step is, but would be really great to take the next step, whatever that is – feedback on- appreciate Jill keeping him honest – always looking for guidance – get inspired to run as fast as they can – appreciate it

Roshelle – not a lot to add – really appreciate the willingness to come here and sit and discuss all this; great to come here and bring this up and get these reality checks, are we getting group think in these pods, making an effort to keep us on track – there have been several requests for draft model – Roshelle will send out via email – take this and put it up and write on it, send us comments, and questions – going to be a living thing

**Wednesday, October 19**

### DAY 3 TECHNICAL DISCUSSION

Two areas to cover – relationship matrix

Took snippet out of 3007 enhancements doc and was emailed out with IRWIN V4 relationship matrix

Make sure reading and writing is appropriate

If get past that – may be beneficial to talk about IR API – see where it is today and see where we need to go from there – still in flux from a development standpoint

### IRWIN V4 RELATIONSHIP MATRIX

Normalization of relationships in IRWIN, sans conflicts

Conflict left out because we only wanted incidents to be in a single relationship at a time

At v4 would like to pull out complexes and include merge and out of area responses (will probably nix OR)

Would like to (look at current integration spec and how complexes are formed today)

Parent and child records are currently formed in the incident table

Reviewing the data elements that comprise and denote a record

With this normalization it will make it so that we can query from the top down or bottom up

Would like to pull all the information out as a separate object and return as part of the incidents

themselves or part of getUpdates

Essentially would like to move from identifying relationships as the children...but identify the parent and child Irwin ID, the relationship, when it was created and when it was expired

merged is a new relationship type

merge will simply be a WF on WF – can be daisy-chained...

would like to talk through these structures and make sure they make sense

out of area response structures – going to keep the notion of SU as a type, but we want to resolve this as a conflict using OR

out of area responses should always be associated with a WF

SU would not necessarily be associated with a wildfire

So to be clear then...

Roshelle - OR will have an IRWIN ID if that is how you resolve a conflict

Conflict – two records as a WF, resolve conflict, one becomes OR

If a center is going to have to create an OR, and they know the fire exists, they would go find the existing WF and bring into the CAD, but the OR would not go to IRWIN...only points in the CAD

\*\*\*The only OR in IRWIN will be those that are the loser of the conflict\*\*\*

all about timing now...(Chuck) if we build something through IRWIN where the CADs share data, or do we make it an IROC thing

business concern – at PL5 and GACCS/NICC – concerned at things moving in the CADs and not keeping the upper levels informed

Roshelle – keep this to the initial response level – we know things will change when IROC comes on

Today in IRWIN it just going to be going back and forth between two

With IROC it should go up through there, and it should follow the same flow, but would need to go through another level

Are we going to spend time and energy on going to CAD to CAD or wait until IROC?

Roshelle – would like to figure out and see how it works now – what we can learn on this first phase and have flexibility – if we find there is a big crash, we can stop everything and not hinder the CADs from doing business as they have been doing – we need to be prepared to have that – probably an ADS conversation – with way Evan rethinking ADS, probably more flexibility and control, and more responsiveness – think we can control the problems with the ADS – need to see how the data moves

Brian – don't see us wasting any effort in CAD to CAD resources

OR a result of conflict, will fall out of IRWIN, if both centers are consuming, we will need to bind the ADS to the dispatch center (brilliant ADS idea!!! – need to follow up on this)

WC currently reads header data from the winning record

CADs need to be able to read from other systems

Roshelle had me explain how IFM and FireBeans works...

Creating entity has to delegate if there is a "hand-off"

The center that created the incident hands the incident off and changes the dispatch center

If we need to do a hand-off, do we need to think through IRWIN enforcing that handoff or do we let the applications do it? Evan always in favor of enforcement

How would IRWIN enforce?

We try to shoehorn in the current pattern – build in more ADS to hand off between CADs, don't feel that is quite enough

Create a matrix between the CADs that would allow one CAD to take over if there is a hand-off, or we can start thinking about adding the component of an ADS between dispatch centers

Enforce integrity across dispatch centers, even though using same credential

Only the dispatch the center that owns the incident can change the dispatch center ID (logic)

Whatever CAD owns the incident – they own the dispatch center – and when change the ID, all the attributes of the incident go with it

Multiple roles within IRWIN, delineating system types...we only want to add this additional level to the CADs

Trying to prevent fighting amongst the CADs

Brian does not envision a center taking an incident over – they would create their own

Roshelle does not agree – ex. Start in state cad, find out it is FS, in the data we would want you to pull in the original record and work off of that

One IRWIN ID!! – however bring into CAD and start adding on to IRWIN ID, don't care how it looks in the CAD

## NEW THOUGHTS ON ADS

Realized when implemented ADS structure in year 1, we did not expect the database to grow as much as it did

ADS essentially recalculated on the fly for everything that comes into IRWIN –

4 little hamsters running

will be caching the ADS – every time a write action occurs, will cache the ADS

Sam Vienna and Evan have been looking at this...some thoughts to prevent read access on elements within IRWIN. ADS exclusively on write actions, but would like to move it to read actions. Expand the numbers...see document

Null will be used to infer no access – no read or write access (default state for any new systems coming on board)

You access IRWIN, we have to give you an ADS before you can read or write

-1 will continue to be the ghost of IRWIN

0 will become read only

Can read/write will use same numbers as today – but flip – the higher the number the higher the priority  
Does this make sense? If using terms like priority and rank, while not from a podium perspective, higher the number, higher the priority, and will be able to separate the rankings out and expand out to infinity if we want to

From business side, as we look at more data running through this, we have to protect this data, resource, financial data, and only allow to specific systems to read it

Concern of CalFire some caution about how their data gets exposed nationally

Maybe this concept will help with the idea of slow data

This will help us identify what is slow data and what can be near real time

Andrew comment – after two days of business focused, this is interesting to bring up in technical – has some heartburn – if default is no access, then you have to go element by element to ask for permission and it will slow things down

Roshelle – we have standard stuff – groups that we would know which pieces of data they get

Think there are ways we can slice the data

Andrew – would be cautious setting really stringent defaults – feel better to be more open than less

Evan – such an interesting conversation, if one signs up for, even a single data element, field, record, that has to be hidden, then you kind of have to go all in and say, we have to configure specific cases – have to assume no one can see first, just in case no one configures, and then go in and say yes, you have permissions – would not be too difficult for us and have template ADS to be created – workflow – upon creation start with a template ADS and then move towards customization

Andrew – slow thinker, not a fast thinker – hope there will be more discussion on later

Roshelle – the work that Ben did and looking at public data, DMC looking at standards and denoting what is public – anything that is slow data is where it would be customized

Evan – nothing has been written yet

Roshelle – it has to change – this is causing the deadlock errors

Evan – impetus – the service times have to be improved – shorten service times, to be sure, however this is a very good opportunity to look at it and adjust as necessary – if we are interested in something for read access, this is the time to do it – template ADS (currently baked into the code – a big ol’ massive JSON file – part of this refactor is throwing it into a table and making visible via services, will allow to adjust on the fly) – maybe part of toolbox

Roshelle – see this as something that would go in the data cache that is available for everybody to see and the DMC would be responsible for managing it as part of the data standards – so users could access and view

Users would be able to know what they couldn’t see

WFDSS wanted to be able to gray fields dynamically based on the ADS

Bottom line – message – IRWIN team trying to create efficiencies on the ADS; as we acquire more data, we are building capability to protect sensitive data

Craig – how would this ADS structure affect any of the support tools that we put out? Like Observer?

Evan – only more transparency – can see your ADS structure in Observer

8.7.4 in Spec

Brian, agrees with Andrew that this is a business discussion, but having a dynamic ability to manage this is important

Andrew – need the capability, only argument is the default state

Roshelle – will talk about from the business

The more you let IRWIN handle the ADS stuff, the better off the systems will be – trying to create this in such a way, that it is easy to see what it is, but let the dynamic nature of the ADS be relied on in IRWIN

Andrew – explaining the complications of WFDSS – can read/write true/false – simple!

Will continue to get canWrite

Evan will need to spend some time thinking through the dispatch center enforcement... Because multiple dispatch centers fall under a single credential...how to identify...

Certain systems may not be interacting with an incident, but they may have the priority to adjust it

To do this programmatically and find useful feedback, would take some thought...

Why we opted for LastModifiedBy

Template ADS structure

Binding of resources – when we introduce IRR capability – we will include an ADS structure in that and we aren’t quite sure it will work out the way we think, so we need to be able to adjust the ADS quickly

Roshelle – would be helpful, sooner rather than later, have a conversation between the CADs, see where the thought processes have evolved to

## RELATIONSHIP MATRIX STUFF AGAIN

Complexes – impact to the CADs is to write to this method

Need to talk through that complexity

What is the impact on the read systems

How does that change the way they access information – most important for FireCode, ROSS, and EGP  
This will help visualize the structures on the map....

Two new methods would like to introduce

Hop on over to Production, because it is there, logging in as the admin sounds like the best way to go  
What!

I feel like projectors should have GoToMeeting built in them...

Systems that will be writing relationships

SubmitRelationship

Read the description

\*\*\*Will want to talk about the security structure on these now, or very soon

This will all go in to the integration spec – that we all know and love

The parameters are in the doc

Would we replace OR with Conflict? Would need to be talked about...Evan tried to look in Rally and was  
unable to find it

Are there any other fields we need? This was essentially done in a vacuum...

There is no update – you are either creating or expiring...the relationship

Don – is there a need to remove the history of the relationship if it was created in accident?

That is simply expiring the relationship

The way we would recognize in the data, per Roshelle, if you create the relationship, and you decided it  
was by accident, you would expire the children and invalidate the parent

We did not think about the end state for the complexes – how should it be handled? Empty shell at  
end?\*\*\*

Nothing that says you cannot empty the complex shell

Business rule to create a complex is at least two incidents...but we do not have a rule about dropping all  
of them out

Roshelles expectation – fire has relationship to complex

Who needs a white board when you have Evan in Visio – Roshelle

Should the API break the Complex link when a fire within the complex merges with another within the  
complex? Do we force the client to run expire and then create the merge, or do we build the code into  
IRWIN to break the relationship when a new relationship is created? The decision point is the same for  
each of the actions.

Merging in 209 or CAD...

Currently the code is implemented that there can only be one type of relationship between two entities...

A WF cannot merge with the CX

As long as have datetimes of things...

To do our due diligence, we need to lock down the merged fire? ambiguity

It is not just enough, to build the logic in IRWIN, summations occur between the child and parent, we would need to continue to do that...

In 209 we would stop reporting on the child, unless we had an update to structures...

With merges there is lots of business discussion that we still need to have...

Roshelle's concern – not sure in 209s best interest to build a capability to merge fires because we don't know what it means

Task group needs to come together and talk about how to handle merges in relation to systems

There can only be one relationship of a type between a parent and a child

Communicate the relationship

Want to think through how 209 would represent it...(merge fires)

All the data cannot merge from the child to the parent

We are going around in circles...

Sean – I say I am going to do this in 209...we need to be really clear about what we are asking

\*\*\*how we do the math – the business needs to decide\*\*\*

for the IRWIN API method, the bones are in place...

how 209, and potentially the CADs – the math around the acres, IRWIN or the data cache doing it?

the question – the read systems will need to be aware of the new array and structure...structures are being returned today, but empty

really about understanding how going to interact with this new structure

\*\*\*With merges, what does this mean in WFSS? Need business rules...if two incidents merge and we do not have decisions, maybe that is really easy. If two merge, and one has a decision, what do we do? And if both have a decision what do we do? May have to disallow a new decision on a fire that is the child of a merge? Maybe we force a new decision? Talk about that or do we add it to the NAG?\*\*\*

Mike Roadifer – been tracking, will require some significant changes on their side to get relationship updates separate from the

Clarity on one thing – we will continue to allow for Complex and Merge relationship types

Create a rule – if a fire merges in a complex, we would like IRWIN to dissolve the complex relationship, rather than requiring the user in the application – from an async perspective, expire method only allows a single to expire at one time, but if allow multiples, put back ownness back on system, unless we allow – throw an error back, and force the user, or dissolve the complex relationship when the merge is created Does IRWIN build the logic or the systems? Both ways? But that is redundant?

The merged child does not need to be reported for the duration of the incident per Sean P.

If leave up to every application to write it, you leave it up to different interpretations...

If this is a business rule and we are going to implement as a community, then IRWIN can enforce it

The only trick is the reportedExpiredDateTime – if it assumed that from the newly created relationship

\*\*\*Roshelle would have IRWIN do it, because it saves time on all of the applications parts\*\*\*

for Sean, helps what his developers would have to code to

Did I capture that, Sean asks... (not all of the circling and circling...but most of it)

Are we saying that we want to implement this matrix – Read need to look at the array rather than the body?

\*\*\*are conflicts going to be handled this way as well?\*\*\*

Roshelle – if going to change the way read for relationships

One relationship between a parent and a child

Only in conflict until resolution

Will have to clear a conflict before a fire merged...

Ties in to OR...if B becomes the loser of the conflict it becomes OR and the conflict relationship is cleared and a new relationship type could be created

See Table 4 – Incident validity and conflict states

If A came in and then B comes in...only B knows there is a conflict...

To continue that pattern...if we move into this relationship approach, B becomes the child of A

If we have a resolved conflict, that represents that B isn't actually an incident – it is a duplicate record, but pointed at the same record, so B would not be in the complex, because it is not a valid record, so there is only still on parent of any type

The existing structure can represent all these things, since we are maintaining the history of all these types

Is there a need for two flavors of conflict in the new relationship matrix? The conflict relationship is expired when it is resolved. OR in conflicts should expire.

Roshelle – A and B and B gets the note that it is in conflict – systems need to know what happens when B becomes a conflict – when a CAD resolves the conflict and says there is a parent, there is indeed a different record that continues, they need to set the parent IRWIN ID...

Andrew – the conflict parent child thing does not work as well...close to 50/50 that valid incident may be B and not A...

Incident A comes in, B comes in second, IRWIN tells B is potential conflict, in end B is the winner, is there a mechanism to assign B as the parent and not A...this piece is difficult right now...A is never set in conflict, so it is hard to resolve

If we re-think how conflicts work in this relationship matrix – is there a better way to communicate this to both systems...?

Andrew – WFDSS would keep B out because it was the second in...he can see A go away, but he wants a signal that says A went away because B is the right one, if the conflict parent IRWIN ID is not being set then he does not know...

Roshelle – the point, how do the read systems know when there is a “replacement” incident

Andrew – well if he lets everything in...but he doesn't want everything in...because he doesn't want the users to start a decision on the wrong one

expiring the conflict relationship dissolves the relationship

if it expires does that imply the relationship was correct?

If decided the resolution to the conflict is that both incidents are valid,

inConflict=true, means there is a potential conflict, not that there is a conflict...don't know there is a conflict until IRWIN ID is set for the parent, but we only know that 50% of the time

merely expiring does not leave a history, when it comes to a conflict...per Brian...

right now, the pattern would be tantamount, to replacing the Boolean inConflict...maybe we leave conflict parent IRWIN ID in, but take away inConflict, then we have traceability...while the two are in conflict – if resolved, dissolve, and expired, our choices are clear – OR, isValid is true or false, relationship matrix would represent unresolved conflict

Andrew – likes where we are going with three potential options of how this situation

Two WF, neither are in conflict

1. If resolve them and one of them is not a WF, it becomes OR and conflict parent ID is set in the regular table
2. If resolved in the other direction and it becomes OR and it points to B I get the parent ID and the conflict is expired
3. Preserve the decision

If you have the loser and you want to be able to point to the parent and never look back, this would allow that

\*\*\*The intent is to just replace the Boolean – inConflict – true/false\*\*\*

Allows an incident to be inConflict with multiple incidents...

Roshelle –what this means – if this is implemented so that the read applications, in particular ROSS, understanding how to ingest this messaging about which record is going to continue...maybe we build this in to Reactor – when a duplicate is created, we can utilize this same messaging to indicate a duplicate record creation

Can we use this methodology to denote when a 209 was created on an incident that already existed, but separate?

Evan – resolution component of this has not changed, we are only changing the transient state of the conflict – we are sending enough information programmatically to change this

Roshelle – lets say the conflict messaging did work and the user got the message, sitting at the UI, but user “ignores” it, right now only way to correct in data is copying and pasting IRWIN IDs at the DB level. Why can't we set up a method that allows us to say these are the same...send the message out to all the systems, okay record created in B, point to this...

Evan – we already do this...the CADs do this now...we can allow the other systems do that...per ADS...

If a system sees a new incident come through invalid False and parent ID true then the system ought to re-point to the new incident

In Evan's mind, what Roshelle articulated, is what we already do

Mike R – systems should re-point to something

Evan...should re-point losing conflict record to the parent

See table 4...

If a conflict is determined between two incidents there is a resolution pattern that is articulated

Three fields today that trap the state of the conflict as it evolves

Action expected, when see this signature in the data, they will take that IRWIN ID and take it and update it to the parent IRWIN ID one, thus sucking down the data of the parent...

Mike R. why would we update? Isn't one going away?

Evan – if system has the record already, one would want to deprecate it –system by system resolution...

Brian – the conflict parent IRWIN ID is the winner  
Evan – and it is attached to the child  
EGP goes with the winner  
Hopefully isValid is set to False – don't think we have enforcement on that today  
Mike R – good, just wanted more understanding...

Are you okay with the matrix?

Don – yes

Brian – yes

WFDSS – fairly comfortable – think thumbs up – asking to make a decision without PM here

209 – yes

ROSS – can't answer that **\*\*double check with project manager and business lead\*\*** Mike was later ok with it

Terry – shouldn't be a problem

Roshelle – valid if ROSS continues with workarounds since IROC is coming around  
Kara and I may have to do some one-pagers on how it works between ROSS

Chuck – have Evan show managers what happens in JSON – hoping to scare them

Brian with Interra – okay

IQCS –

IQS – not critical, not mandatory to put experience on a complex

Roshelle to Evan – get this documented and the specs out so everyone can start hammering on it

Evan – will adjust the code to reflect this

Roshelle – not adding any data elements this year, or changing any standards...actually OR...

Don – by doing this does the inConflict data element go away?

Evan – yes

Going to replace the Boolean with "this" relationship

**\*\*\*Is there a TBD data element with perimeters?\*\*\***

Would have to build another table, feature class polygon type, would make sense, on its own update frequency...

**\*\*\*separate business meeting on that\*\*\***

methods would be based on the business requirements

will getConflicts will continue to return "that" and it would allow the system to create the conflict relationship – comes back to we do not do hard validation

IRWIN identifying the conflict

As a system, should we be allowed to identify conflicts?

When a conflict is resolved it is taken away, but the resolution may be the creation of a relationship...but that is different than what we have now

Evan – relationship would only exist when the conflict existed, when one lost/won,

Brian – call getconflicts – would create a relationship and type: conflict, populating one or more records, and then they would expire on resolution

Evan – as they are resolved they are expired; constructing and deconstructing a complex is the same

Roshelle – biggest effect on API is the relationship matrix

Test at Integration testing...also test WIRS and any of the new systems, that everyone is comfortable with their compliance...

Any other thoughts for implications for extended teams...?

Evan – we never talked about the read methods...for relationships

Walk through real quick

GetMethods – being adjusted to account for the relationships

See the document

Look at GetUpdates

Simply an array of these relationship objects

Because tracking relationships very similar to incidents, as relationships created and expired they will show up based on the date time provided in getUpdates

The system can iterate through the updates and create or destroy them as needed

On phone (ROSS)– in list of incidents, can we have the relationship?

Evan – absolutely

Question rephrased by Evan: the observation was it would be beneficial to have the relationships as part of the incident object – agree absolutely, would allow the incident while being processed to see the relationships it is a part of – they were thinking similarly with getIncidents

ROSS question – if relationship changes, would that trigger?

Evan – we have not thought that far down the road – knew the relationships array would contain that information; would make sense that this would include getUpdates/getIncidents would include incidents that changed relationship status updates

Andrew – we are sure that if I call getupdates and there has been a change in the relationship, and the incident to which it refers, I will likely already have that and I won't get an error?

Evan – should have it, if not, should be able to use getIncident to get it

Andrew's point is valid...believe the order that incidents are returned in is in descending EPOC (first in first out)

If new incidents picked up in the cycle

As long as getting the oldest stuff first, and processing as we go, process the insert and then the relationship as we go...Andrew – did not know if we were a stack or a list

Evan – action on incidents then action on relationship

Relationship binds them together, it does not manipulate incidents, it is simply a state

Relationship object containing an array with incident objects

This would be every relationship current (not expired) via GetIncidents

Expired relationships are gone – today the only way to acquire is via getUpdates

An incident object will contain the current state of the incident

Could be a better way of representing this...

If pulled GetIncidents = current state of incident – important to note

Any suggestions on that? Does it sound okay, workable?

Give it a think...

Mike R & Roshelle: feels it is okay for ROSS...a lift, but not overwhelming  
When V4 released, will bridge...but would prefer systems to go over quickly  
Is there validity in a V3 system creating the relationship, post resolution? Feel that is a lot of work for so little gain. Would like to say no as it has no real benefit.  
Everything else can handle bridging

No changes to ADS required for this

Permissions: have not thought through it, other than allowing certain systems to access this

If there is an ADS it probably is not an ADS because we do not update

Maybe enforce creating relationships...beneficial to talk through this...or allow to create at will

Roshelle – between CADs and 209, am inclined to leave them equal

Evan – to talk through that –

Roshelle - if 209 creates the complex, then CAD could disassemble....more opportunity on the downturn...209 makes it while a team is out and then the CAD takes over

Chuck agrees

Keep CAD and 209 have the ability to create and expire the same relationship on incidents