MOV\_1526

1:30

sapphire.component.ts

* Tokens (localhost:3334/auth/jwt)
* Rabbitmq (two users editing the same system, then they get notifications?)

Palette

-are all associations that need their own endpoint and need to know what is allowed

-Console Log -> Application, then look for MODEL\_TO\_ASSOCIATION\_MAP

4:00

Model Services (model.service.ts)

-if it exists get it, else hit the endpoint?

-model information changes between releases

-talking about Savant models

5:50

Edit service

-most of the logic

Model service has no DB stuff but edit(?) does

6:40

MongoCompass

-get URL

-localhost:27017

8:00

-Only thing we care edit-service and model-service

-perference.service is mostly for light/dark mode

-perfence service is FF, standalone means off FF

MOV\_1527

security-marking-service

-icism are security markings

-backend services is Savant, in order to get it work with FF we had to fork it and modify it because of data tokens and authentication

1:30

Import/export service

-can import/export service to and from Sapphire

-simulate doesn’t do anything

-map menu but a CDK overlay

Don’t need a login screen, all the authentication stuff is handled by flexible flyer

app/system-manager is basically surf manager

10:30 system-editor/tlm-graphic

Legacy used to call TLM an STD (State Transition Diagram)

-you still might see STD since they don’t refactor

18:00 primitive and sequences

-Primitives has property sheets (basically not TLM associated with it), sequences is not a primitive because it can have TLM diagram

Property Sheet is what I will be working on! (property-sheet.component.ts)

-PS opens in a new tab, it loses context of the TLM so a lot of stashing session data that happens

-holds all the data, endcalls

-maven good for automation

-H Drive (create .m2 directory), H drive is hooked up to Linux box?

data/scratch/sjm39/SMTFF/edit-service => mvn clean install -DskipTests

-then run the SMTFF scripts to get local podman compose

-change the .env files

Front drives the back end

-maven good for automation

-can delete m2/repository

Offline/Online

-Online is broken on local FTC development because it connects to jade and that is broken

IMG\_1630

smtff-services/model-services

-need model services for endpoint for data

-podman stop <iD> => podman container rm <ID> but too many dependencies

So take down everything down in smtff-scripts => podman-compose down

Then go to model service => podman image list, podman rmi <model-service-IMAGE-ID> => mvn clean install -DskipTests => error so git pull

8:45 Don’t add a passphrase RSA

12:00 cache, .m2/repository

14:20 H drive m2

-Change the size in style.css, when you override material components, you have to do it in the top most level, won’t work locally

15:00 Develop needs to have integration branch, don’t want to merge into develop,

19:00 When we are ready to merge the integration branch back into SRC, develop would be updated? Rebase that branch off of develop, put a MR for develop but actually won’t merge it. Just for testing. Port the branch in and delete the MR

20:05, our develop into FTC is being manually bought over from SRC, SRC is the source’s truth. Don’t want to merge into develop unless we know everything works in the pipeline

22:00 don’t need to create another branch for small changes

28:39 You can add one comment per row

-Creating is saving the file to DB, generating the mmID

-Adding is when you hit apply button, it adds the mmID to the property sheet in the system

-Problem when you hit cancel, after generating mm. Now you have a mm in the DB that is orphaned

Light mode, don’t call it legacy (TOOLKIT)

They didn’t like Flexible Flyers, they use it differently then NASIC, NSA

-We are sub and kind of prime

-changes to edit/model services

-can’t just deploy the images up there because they aren’t getting built right now (those old images)

-clone the repo and run maven

-first build the SMTFF parent pom, build the libraries => models, legacy, services then deploy

-when you save to a property sheet rows, its going to be an array of mmIDs

-open up dialog, then grab the mmIDs to get metadata

4:45

Network-> Response

-After creating reference, went to Network tab and click on Citations

-Because it was grabbing all of the source reference

-Hit apply to save otherwise won’t

-What happens if you hit delete and don’t hit apply then it doesn’t save

-Adding a citation automatically saves it but need to hit Apply for delete

-WAIT, creating a citation you need to hit Apply but maybe adding it doesn’t

16:00

Network -> Response: search for mmIds

-payload, what is a payload?

Service user guide is endpoints

-metadata save is one endpoint call, metadata is associated to multimedia object

-it gets shared if there are multiple references to the same object

-MMA id array, that gets saved with the apply button that is when you update the metadata in the backend

-that does not trigger a change in the property sheet, because that is specific to MM object not the properties??

Rebasing vs Merging

-git push –force

-don’t like linear trees because you cant see where things change

-CORP has the share multimedia? Not even there yet

26:00

Depot: NASIC implantation of pipeline and gitlab

Jason will push it to Depot, then grab it from Depot to SRC

-SRC pipeline will currently push to Depot

Depot is the source of truth, SRC & FTC will pull from Depot

-We will never interact with Depot, our gitlab is just mirrored and just push/pull on FTC,

-once it is merged, Tyler/Jason can test with SRC stuff then move it to PO review. Then Brian/Roman make sure that acceptance criteria is good, then move it to done.

1:22

Edit-service/server-webflux/src/main/java/EditServiceApplication.java

-last function

-call would be on serviceManager.uploadMultimedia

-datastore.uploadMultimedia, datastore is the one doing the work

Business-mongo/src/mongoDataStore.java

-line582

SMTFFMultimedia is our class

Ewire-legacy-api/src/mongo/multimedia/MongoMultimedia.java has all the metadata already in it

-Try to avoid touching this one because you should only touch this one for input/output.

Sapphire Model

-purpose is store data (POJOs)

-no business logic

-so that all the services and legacy api will use the same object

-anything that starts with mongo is legacy?

-anything that starts with SMTFF are mongo objects (M: makes no sense, should have been flipped)

SRC piplines probably only have ESLINT, no html/css

-mongoDB, containers must be running?

-legacy api are java 8

55

-Spring Boot 2

-make a new fuction multimediaFile

-CORP think of a Z drive, everyone has access

-ABOK within the system

IMG\_1794 ( will delete)

-@Operation ( responses ) are the swagger stuff

-A situation where we import MM without metadata is export/import , where you just want to upload a file

-don’t have to do null checking because they can all be null but if it does exist, it needs to be this type

-smtff-scripts->compose->conf->docker.compose #you can see what edit service relys on

-psa shows containers

-pc down edit-service but too many dependences

IMG\_1795

p logs -f <container id>

-request parm not used often because we are sending files, everywhere else we are sending JSON

IMG\_1935

3:00

-Model service doesn’t do anything right now

-supposed to handle any of the model information it can support files

-models are closely tied to K systems and other parts of EWIR

-I could make these objects with the model??

5:33

Model Service

-building all of the branches (subgroups, folders, everything on the palette) there is not data in it

-doesn’t know about the data

-Edit Service is going to go through the system and grab all the entity then send it frontend

-Then frontend will take the two calls, and merge them together to a single tree

7:00

-If it has an entityInstanceId then it is an instance?

-This is a physical entity in the system, the data

7:51

Specific type is “ELINT SIGNAL” (possibly just the display name)

-children and parent both have specific type, that is how we map them

8:18

-going to get everything from the model service expect the children (data)

9:36

-

-model gets everything

10:55

-Edit service knows about a system

13:50

-get the entityInstanceId

14:00

-framework comes from model, data comes from data

15:20

-not many differences in our use case, but there are a lot

16:38

-create an endpoint in model service to get framework (getPalette)

17:00

-Edge case (rootPalette, getSinglePaletteNode)

18:00

-might just be modelID for endpoints

19:36

-modelID/domain might be useful because we are getting information from the model

20:00

-code should be in legacy

20:56 <- IMPORTANT

-is the legacy/tool API that we are using, do they use have methods to build this palette off a model or do they need the K system

-if they are building base off K system like we are doing, we have to redesign it from the ground up

-that digging into toolkit API, and see how they are grabbing the different nodes, and use that logic and cut it off at the end

-does toolkit have methods to build palette off a model or do they need K system

-we are building off k system?

-use that logic and cut it off

21:30

-K system are the ones with the 3 field

-MongoKsystem we implement it?

-read/write so we are extending MKsystem, mutable

-MKsystem is not an interface

-so we are extending a class vs implementing a class, forces a multi workaround (22:40)

23:15

-Fix this if possible

-default mutable TreeNode, it’s a java swing class

-APACHE commons?

-not thread safe so love to get rid of it

26:00

Association <- Important later

Second IF

-looks like its getting the palette information

29:40

-Code fails in Sonar

-cyclic complexlity

30:55

-should be recursive call on the model side

32:00

-leave the code be, that is okay

32:50

-in theory you can get data and framework at the same time

38:31

-Doesn’t help me because I want the you want to give the folder sequence and get all the children off that but you need to know the numbers ahead of time

39:21

-Uses advanced Java techniques

-can be simplify to 100 lines

40:52

-why would it a problem

-because if legacy gets the K system, our model doesn’t have it

-TOOLKIT API is so much

42:--

-download it on D drive?

43:

-if you have the jars, just open it VSCode

-CTRL + click

IMG\_2016

2:55

-The MONGOSTDPalette all of this code should be burned? Away when we get to the design

-they were mixing functional code swing code

-we mostly copied the stuff

5:20

-Frontend combining edit/model service to get data

-Do not have to use the DefaulTreeNode anymore, make my own?

-PaletteTreeNode is what we will be sent to the frontend??

6:30 <- important

-lazy loading and stuff

-lazy loading, when you expand Modulation, you get the count

-Expand the Modulation RF, you call edit service to get all the Palettte Tree information

-

9:00

-If no entity instance ID then we assume it’s a folder

-the tree on sap editor side will probably be the same, but what gets returned in the edit service is different (mostly the same)

-more important

10:50

-legacy just knows not to include it

11:40

-Fixing legacy

-model update and branch it off them, then fix the XML there

13:40

-Creating an EPIC

-stories/tasks

15:00

-Brian/Jason wanted stories but Roman wanted don’t do it if it doesn’t make sense

-Not going to be using DefaultMutableTreeNode (because its java swing)

-A lot of this mixed GUI (swing)

-not thread safe, not good for strike force

17:39

-Sorting is not a model information?

23:00

-Hardcoded stuff

27:50

-Just keep states

29:50

-It would be easier to change the UI, it was to have the states as a separate folder

-keep the state and let the UI decide

-Want to match the legacy but maybe don’t want to show states for the User for a cleaner palette

31:40

-Doesn’t change the frontend at all, <-Rewatch

33:48

IMG 2022

-Palette Tree which going to have PT nodes, of two nodes. A branch and a leaf

-Branch and Leaf are going to extend PTN

PTN

-going to have core variables that a branch and leaf has (…just displayName)

-create it as an AbstractClass and type it. And create two implementation of PTN (branch and leaf)

-two separate leafs (one for system, entity)

33:12

-Loosely defined JSON?

-

34:00

-Model service has no leafs just branches

-Edit Service is gonna have branches and leafs

But two different type of leafs (system and entity)

41

-Two different trees

43

-sapphire models is mixed with mongo class

45

-do it polymorphic

47

-Coding

55:55

-might not need the parent

1:02

Might want to use generics

1:04:24

-superbuilder

-more friendly for polymorphism

-jackson?

1:06:13

-PaletteTree is where we are going to handle functional of both branches and leaves

-IMPORTANT MAKE NEW CLASS AGAIN

Make it a private final List<AbstractPTN?> nodes;

1:08:13

All args constructor

-You have to do PaletteTree(pass in children)

-privtate final indicates that its needs a children list

1:09:31

-When you are creating a PT, you are creating a Branch or Leaf Object

-just add definition?

-it doesn’t care because its all APT?

1:10:20

-In theory you can create a PT with both

1:11:31

-system is a special branch

1:16:27

-Associations

1:45

Interface vs Abstract

IMG 2026

55:00

-you do not write a separate test for every possible combination, leads to hundreds of tests

JUNIT 5 Parameterized Tests

-Write a Stream<Arguments> (4.6) Method

-One test written for 4 different cases

58:00

-Some of the Mockito stuff should be mocked globally?

-Make sure to look at the version 3.6 -> 3.9?

-Doesn’t even call manager (never get used, we are mocking it)

1:00:27

-put the when at the top of the file? Because most of this stuff is harded to specific test cases

Line 189

-Example, when you are asking for EIRD, return this mockObject right here

1:02

Plugin -> Coverage Gutters,

1:05

-Controller has to the Spring, no functions to Test

Libraries -> sapphire models -> target -> site/jacco -> index.html -> VScode: show preview

1:12:56

-have to test static classes

-only need to test contains on Enum class, don’t need to test constants,

1:14:51

-Line 152, test better

-no concept of SMTFF Domain

-use testAttribute, when a test fails its gonna say Test not equal to Mock

1:16

What he made for Tests

1:19

Reflection

IMG 2126

1:20

EIM – OEM – RTM

-Table view

Go SystemCompare Service on FTC, feature/branch => business => config

4:25

-The configuration is a feature task

Line 26: Just hardcording for now? But in the future going to read it from a file or service endpoint

CompareAttributesEnum.java

-Creating a PRI of modelId and compareType (Parametric) (State, ModelId, CompareType)

6:50

System has value and field name and doesn’t have info like what data type it is, what kind of comparison it is, what unit of measure it is using. This info is all in the model so we have to do quite a few lookups, combine it then execute the comparison. Because we can't compare two Strings because we don't know if its an int, float, etc... The attributes are all Strings.

10:10

Need to know the modelID for

1. Which attributes to look up

-Theres going to be a config file, that tells us given this model, comparison, state object we know which fields to compare

12:00

ParametricAttributeValues.java

-Line 36 (private String[] attributes) multiple attributes we can compare, and this can’t be strings. Going to be a complex type because we have to know the order to compare in, there might be other rules we have to write onto objects

-value is in the system

12:40

-dictates on how to do something. These are all the rules determining when a comparison is initiated, what does it have to do? I got an EIM, PRI, comparison type.

13:55 !

-reorder the triple because first thing we need is comparison type, modelId, entity (states)

-So here is the value you need to do for the comparison

-So the rules goes through, grabs all the ~~value,~~ the metadata from the model. So the uall? And data type. Then grabs the value from the system, then executes the comparison

If we do this right, all we have to do is add a new entry in the configuration then done

15:10

Making it smart by being able to determine what to do based on attribute names in the configuration

16:10 !

-They want Nominal value there as well

TOL needs nominal value, they want lower/upper and nominal

-NO TOL, just nominal then assume nominal is lower/upper

17:30

-TOL/Nominal are not separate rules, you don’t get two separate results from it. You can get one result from both values

17:55

-Line 27-29, think of this configuration,, the value of this map being what is the result calculation we need to do. And for the simple TOL, Nominal there isn’t two entries (in the parametricAttributeValues? list) because can’t display one without the other

18:40

-The result row in the UI, that is the result of a rule we executed. (The comparison rule)

19:20

Modulations

-Don’t know if we want combinations of Results into One results object. Two paths: one rule for both or two rule and combine. Leaning towards separate rules for one result. Other wise multiple rows for the same comparison

20:45

PRI graph UI

-In theory as an example, this did the lower and upper rule with the nominal value there too. But if we were to separate the lower/upper (just call it TOL?) and nominal rule, we would have display it in two rows.

Which isn’t right for this case but Future wise, we might have some entity that has dozen attribute you want to compare. Do you want to compare as separate rows? New concept so nobody knows. Does the user want a row for each attribute that being compared or just one row with the comparison of all entire entities

-Probably don’t want a row for each attribute because it will be a lot

- RF, Pulse, PRI its easy because TOL and nominal work really together. Think of it as a single rule

Aggregate: collect into a while

24

-Design of the actual software, do we want to have those as separate rules, but have an aggregation rule that aggregates the comparison together

-If they want to compare other attributes, is there a hierarchy or separate it?

25:10 !

High Level

-Every single attributes should have its own rule/execution then a rules of rules saying for a PRI, TOL is a combination of TOL, nominal, extreme limits (3rd option) It will be defined in the configuration. Saying these three fields that get worked together to get a result object. Then possibly two rows in the result, if they want to do TOL and Drift (because drift has nothing to do with TOL, making it up as an example)

27:15

To me TOL, nominal and EL are one of the same, 3 different values to do same calculations

-Would prefer to see single row

27:30

Auto update

-way down the line

32

Extreme Limits

-Rule for this row is 3 attributes (TOL, nominal, EL)

-users may not want to see EL. (NOT in column, but in a Graph) EIM may not have it, RTM always will?

-Users dont want to see it as a column, but see it on graph

-Falling within EL is okay?

37:20 !

-Cant update changes

39

Increment

-Andre did the UI skeleton, objects. Rules and results are done. How will it look in the DB is done. How are we actually going to do the math (MY JOB)

40

Dao/ResultObject.java needs some work but these are going to move to Sapphire Models

-Partially done by Andre so double check!

-Results are basically what I need, might change still a WIP

40:40

-Possibly more. (Potential New/Update/Valid <- might be document)

-Need to store New, Update, Validated data as a ENUM/String on my side

42

-Compare on dropdown tools on surf manager

42:44

Comparison Page !

-No results objects here, the calculations are already done (its in the DB). There is nothing displayed here

-Own tab in browser

46:30

-Compare object is gone

49

-API EWIRDB light

52:30

RulesExeutor.java

-Basically this is where we executes our rules, creates the results and returns the results as a list

-Andrey is working the display part (not the graph)

-A should call this, right now an empty list

54

-We need his changes, because his changes will call this and then this will go through and execute all this stuff

-RulesExecutor might be done possible

-Creating a rule factory, with all the rules and going through the work

54:50

-store the result in a flat list, right now the entities are sorted in PRI, RF, Pulse (inside are all entity instances). We are not doing that. Too complex for no reason. Just a flat list of mixed Results Objects (Results: Parametric, Set, Simulation mixed with new, update, valid)

-mongo lets you do mix, type alias in Mongo and abstract in Java

58:15

Rule.java

-need to figure out what is a rule

59:35 !

Overarching rule then individual rules in there. Operating Limits Rules (Overarching) within you have EL, N, TOL rules. Those 3 rules then get executed then compiled together to form one Result.

-Epic might not be the right term for this, for OL EPIC, in there 3 separate rules (EL, N, TOL). The Epic is going to generate a result object from the execution of these three rules. (Same thing as above)

-In the future, if we they want to add a new set of Epic with a subset of rules to generate a single result. Should be able to do that

1:05

-Right now OL is a generic epic. Multiple entities have OL. Now does every entity that has a TOL has EL? Don’t know so need to be flexible and have NP checks.

1:07:13

-toolkit jars

1:14:25 !

-If I come up with a different set of rules, different ways of doing rules. High level rule that has a subrule, then subrules gets executed then aggregated into a single result. Maybe I need an aggregation?

1:15:15 !

-I can define what an epic looks like as an AbstractClass, define the functions like initialize rules, and aggregate rules, calculate/execute rules. What would happen is that aggregate would go through, and aggregate the 3 rules together, but wouldn’t actually implement aggreagation at the top level Abstract class. You would make abstract function to be implemented by each individual Epic. But a top level function on Epic AbstractClass that says run, and it would initialize and execute these rules and aggregate the results and return the result

-So every time you have a new Epic set of rules (?) we just quickly make the new Object and it goes through and figures it out because we have a factory method that goes through and nows know to create these new Epic. Super simple (HOW?)

1:16:45

-It would allow you to do define a new set of rules with a new set of logic in half a day. Because you know how it works, you implement that object, you add two hashmaps for a lookup table and nothing else changes. ?? Because that new rule is a lookup value in the configuration.

-Testing will be a pain

1:18:35

-The result object has way more than whats in the table in a complete different form because this is the DB data

-How it looks in the UI? is the DTO (My thoughts makes sense because of Sapphire)

-Endpoint is going to grab a list, that endpoint can dictate how the data from DB gets manipulated to display

-Like extreme limits, … !

1:23:00

-TML

IMG\_2131

2:30

-Is there a EL rule?

-A thinks TOL/N might just be a rule? We are not doing math with EL, just want to see it on a graph

Writing Test for the Service

-He probably hasn’t validated his code works

-Just try to see if you can his functions and see the results

-Writing test for the service as a whole

16:20

-If I pass in the entities it expect, does it give me the number results

-Make sure we have the this thing ready

19:20

-talking about rules

23:00

-Always one ever RTM (baseSystemKey)

-metadata list is a list of EIM in a specific format and just have the necessary field

-Looping through each EIM and that’s where we need to do the basic calculations

-do the call in here SystemComapareServiceManager.java

25:11

-Type =/= id, what is ModelType?

27

-use sapphire data mongo the system version and get the basesystem and get the entity field out

IMG 2167

5:25

Dao/

-CompareModel and EIMCompareModel should be defined by A

-they should go to EWIRDB/commons, because both Lite and Sapphire will be using it. These will represent the DB structure (LOOK AT SMTFF ENTTIY INSTANCES)

-Will be moved to sapphire models in the mean time

9

calculateValue()

-this method has to be defined by every single one

Maybe needs baseline model

-getCompareModelAttr, BaseModelAttr should be the only calling that stuff? (like the epic??)

GenerateCompareResults is the one we need to define

-this is the one going to all the work?

We should have PRI/RF/PulseRule.java and all it does is define the calculatValue, findBaselineModel from AbstractRule.java

11 !

-Modulations have TOL but no nominal

11:58

-like the idea of OL Epic and be repeatable

13

-No graphic for modulations

14:15

-SmtffAttribute has to be a list, it holds a lists of values

-We have the TOL,nominal which are two separate attributes and the modulations have so much more

15:51, changes this part because the result has to be a list

22:30

-Grabbing the attribute from the entity objects

23:30

-Comparison Attributes is the mapping the attribute from compare and base

IMG 2168

:30

-Go through List<String> compare and base AttributeNames <- confusing

1:45

Can’t be static, might can change comparison rules on the rules

-consistently rereading the config on how to do a comparison

-none of this will be persistent

2:35

-if the user change the config file then regenerate the map

3:05 !

Users Preferences

-a flag indicating a user read it

Comparison

-is it global or user to user basis. Some users might not care about certain attributes

4:45 !

-configuration will be super complicated

5:30

-pulling the attribute out of the entity instance, pulling information from the model because we don’t know what those attributes actually are (unit of measure, type <-defined in the model)

-Combine entity instance and model and combine the result and generate EWIRDB model specific

-Next step is the PRI rule which is more simpler. We have all the attributes, rules, lets just calculate the value. Then display it

-Complication is simpler higher you go up (which is good because higher means closer to user)

7:10 !

Compare Object

07:50

-To add a PRI rule, you just say how the calculation are done which I don’t really have to do because its in the config file. It says to use TOL (Range), Nominal (int) defined in the model then call the comparison (AttributeRuleComparisonUtility.java)

8:35

-PriRule

If any of the datastate is new, …

9

-modulations…

9:25

-Needs to be combined?

-Need two separate EPIC

-For this attribute name, we group

11:00 !

-mod attributes that are related

-XML files

13:55

-are configuration are going to map this stuff

-Need logical data type and um (unit of measure)

14:45

-Get the TOL rule done

-need to test the ACU.java

-Change the methods in there to Number Object

16:20

-DB are all Strings

19:33

-Got to map this

-use the Number class instead of primitive

23: 30 !

-Talking about rules

25:20

-Framework is in a good place

26

-As soon as we figure out modulations

-jake compare each one, if anything is different its considered new

26:45 !

Might need to rename abstractrule

calculateValue

-For every attribute on modulations, if any are different then its new, or valid

-Once we figure out how to do the calculations, how to do define the rules and configuration, and then workflow of getting the attributes and model (gathering all of the information), performing those calculations. That is what we are doing right now.

27:55

-Perform user results

30

-Double checking next steps

-Next step is the backing data.

AbstractRule.java

-we need to get the actual model (RTM?)! OMG NEW: I do, The model names: RTM, EIM?

-we need a function that goes grab model from the model mapping/support files

34:54

35:00

AbstractRule

- we need to have a function that for a given compare and base and grab the model support file

Then grab the model info for the attribute we are comparing

-need the um and LogicalDataType

-

- LogicalDataType convert it to Java Equivalent Object

37:30

-Still like EPIC, Group like attributes should be grouped together

44

46

-Each attribute should have its own comparison type?

47

-Focus on getting the information together so you can perform the calculations

47:50

-example of reading from model

PropertySheetAdapter.java

-unit of measure

Recording

1:20

-endpoint gets the configuration, because that’s what it determines in the DB. Gets the model RTM gets compared to, individual states(PRI, Rf, Pulse) it needs to grab from the comparison

2:10

-Going through every single key in the map, because the keys are triple of base, compare and the state. Grabs every single and goes through and finds two? models we are using and grabs the state out of the triple

-He did push the changes to depot?

-Rebase, better to delete the branch and repull it

-We get the data, A already extracted the information he needs (Compare Information), and then he calls rules executor and pass in the entity instance lists (Pri, Rf…) in a flat list

-yes in a Flat list for every single EIM, then Rules executor creates Rules then executes the those Rules to get those Results, Rule (generate compareResults)

-So every rule is going to have that and defined by the AbstractRule

-So its not going to give any data to it? Every thing it needs to know about how to do a Rule, needs to be done in the constructor

-Get model info before we generate the rule because then we can pass every rule the correct information OR does it make sense for every rule and look up the information

6:00 !

-Speed

-Actually updating objects,

7

-What it means to be a Parametric Comparison vs Generic Comparison, do we need to know about model information for a Set Comparison

-That’s why he was thinking the rules should handle the model

-The RulesFactory that are creating these rules, we can put it there

-RulesFactory will have createParametricRule, createSimulation/SetRule

-It could be so different that it may not matter

-Others that use TLM might have to do with switches

9

-If it has a state view, its an TLM

-RTM does, OERD/EIRD do not have TLM, it should show property sheet

10:30

-That LUT, has nothing to do with configuration and has everything to do with mapping of the LDT, map to do with the utility file that will do that actual math

-I use those methods that M wrote to get the compare/base attributes (comes with the value),

12:30

-How do I know which attributes to get? That’s in the configuration

-So at this point, I know models, state because you are comparing states. By the time you are in the rule, what I have is the modelId, baseModelEntity list, compareModel entity.

-Why is one a list? Base is a list because I am EIM’s PRI to every single baseline PRI

14:55 !

-Talking about selecting an RTM to compare

-Configuration tells the lookup to which entity to grabs

-it’s a list of EIM system,

16

-No ten result objects?

-if the compare model had ten PRI, you would see ten result (but not the base)

-DB is dumb, it doesn’t know what type of entity it is (doesn’t know that it’s a PRI), but we are passing a parametric ENUM.

-Each rule is going to one single state type. Its doing only one compare instance of the compare model?

18 ! recapping

-the attribute I need…. Silence

-we have the entity instances but not the attributes

29:20

-Not opposed to having the constructor doing some of the work (AbstractRule),

2:

3:40

-No Pri on base model, weird edge case

5

-accepted is way more complicated

10:20 !

12:55

-workflow

16:15

-callables

19:55 ! – 21:30

-every thread results in….

22:53 – 24:40

-list of results

24:50 !

-The information I need is in the config files, get fields names, I have the state, compare/base model

-returns a list of attributes of names, so Im going to get a list of attributes

-Given a comparison rules, we know we are comparing Pri of an RTM of a Pri of an EIM, Im going to get a list of values (Most Probable Pri, etc…)

-Once I know that information I can get LDR

-I can get the LDR the same time as attribute out of the entity.

IMG\_2196

-Create inner classes since these ResultObjects do not leave classes at all

1:40

If inner classes are protected then possibly only subclasses can access it

4:30 !

-I need to know the metadate too like the name?

Picture: add compareModelName as well but why

6

-We don’t need to know the actual Pri, because we have PRI state rule, so when he does combineResults he already knows that ParametricResultObject.builder.parametric(“PRI”).

7:45

-Need the PRI name and ID? ID is useless for Users. Since Name can change and ID can’t we might need to keep track of Id.

-if you want to open the property sheet you need the id, we want to give It the state id and open the property sheet in a new tab

12:30

-kModel, don’t I just write the function to return kModel? We don’t need the kModel between function calls. Like one function needs it (what I Said)

13:50

-the configuration, kModel you get on the fly. The state we know based on the Rule that is executed

-The rule factory is going to have to know which state to use

18:50

-Comparing Nominal vs TOL is what screws us

-

IMG\_2201

7:20

-entityInstanceName

9:30

-What happens if no TOL/Nominal

-If Compare Model has none then return an empty list

-Can’t compare Compare TOL to a Base Nominal. Q: But what is Compare had a Nominal? Then we should be able too

11

-Outside of the loop in the Rule Generator, in the rule generator where its doing each and every EIM, for each and every state.

Thoughts: I remember looping through all the EIM entities

11:45

-May have a problem?

12:20

Talking out loud

-What I need to know for an EIM attributes that we need to compare, you need to make at least one of them exists

-I need to add a function here that gets all the compareModelAttributes in a list form and same from the base -> he has written this code before. Now move that code into the config?

14:50 (He may have already done this)

-List<String> compareAttributeNames needs to call configuration file.

16:30

-Can write this code here or AbstractRule, what I need to do is take those list of pairs, and separate out compare/baseModel into lists. These are temps, we don’t need to save them just need them to pull out of SmtffObject? Once we do that we can then ask if the list is empty. If empty then done

17:50

-In base model, we need to make sure two things that are comparable, cant be compared? TOL-TOL, N-TOL, and N-N. But cant do TOL-N (Compare TOL – Base N). I think just check if Compare has a N?

-Error handling needs to be its own function and function should be in PriStateRule.java because it might be different for other states.

-Make it an abstract method

20:25

-By doing it as an abstract method that the class has to do, therefore you can use that method in generate method on the AbstractRule

-Weird thing using methods that aren’t defined buts its okay

-Because you cant make an object of an abstract class you don’t have to worry about breaking things

22:55

-The modelId we need to pass in

-The RuleFactory.java has it

-Change the compare/baseModel -> to compare/baseModelId

27:10

-keep it protected, because if they are private the child class like PriStateRule, has to call the getter which is annoying. Protected is allowed within child classes

30:35 ?

-Need to strip out the c/b attributes, not sure where the best place is config mapper or when I grab the list of parametric attributes to strip it out (maybe not this case? Because I am not looping until its too late). Looping once I check the EIM.

-Don’t think its expensive since its map

33: M screen share

34:40 -> Configmapper

-Config strips out the list of attributes

39

Bind stuff

42 - 44?

-Testing

47

-Those model specific functions I want to do (like LDT?), if I take out specific like N, TOL but pulling out the data from the Objects and getting those things. Maybe even look into configuration based on a certain model type or PRI. Like if you know I Pri and model, how much of that do I think I can pull out into a class either a static utility class or a instance class where (screen share)

50:50

-default

If they don’t override it then use the function inside

51:30 !

-If for some odd reason, you need to have a very specific sub method, you can override it

-PriStateRule, there might be something that will be shared between states into a simpleStateHelper/Compare

-Either have a separate modulations interface or have the interface override it

-Some things you want to put into pri state rule because its not generic enough

54

-if something is shared between states (pri, rf, pulse), <- SImpleStateCompare? Lets say getAttributesFromModel is generic enough

55 !

-Write down the functions as I am doing it now, but pattern is like this is simple state, modulations, or this is just generic parametric stuff that maybe something specific to a Pri or a certain thing we need to override, it might make sense to pull out it out of the abstract rule, and into the simpleState (whatever class)

-if all share it should be abstract, if ss shares it it should be simpleStateCompare, mod -> modSatatecompare

58

-I can also do in the AbstractParametricRule?

-Might make sense to put the mode stuff in APR or SSC?

59:40

-Depends where you need it, might make sense to put in Abstract implementing it or individual rules

-Because some of the model stuff, is that going to be in more places then just parametric comparison? So do we want to put it higher level up so set and simulation can use it

:29 !

-making the pairs, that is very specific to PRI (and rf and pulse)?

-uom comparison…. Can be thrown into a interface

01:20

-Example, it is okay if it doesn’t match… example like PRI iis okay if the uom is valid but doesn’t match perfectly

-that is why I am thinking about pushing it on an interface and default values? Vs a utility class that doesn’t change. Now your logic will be do I call the utility class or don’t I. Function that is calling the utility class, is in my parent abstract class and now do I have to override that function as well in order to force it to not call it anymore

-Balances where this might possibly be different per Rule or per Comparison Type? If so similar 80% then it should be in an interface

-100 then in the utility class if shared across multiple places or in abstract class only if abstract parametric rule

4

-messing around with combineResults

5 !

-no modifier then package protected. So anything with the same package works?

-so the files inside parametric can call this function?

13:50 !

-

16

-If it’s a PRI, where do I implement this function, in AbstractSSRule.java

-wait not sure where the function would go, not sure if its specific to each individual state implementation, or abstractssrule, or an interface that it can be overwritten

-if all six states use the same function then should go in APR, if all simple states need to implement but not all modulations…

18 whiteboard

After 31, useless

37:20

-Higher I go up better

-its not configurable from user

IMG\_2301

-Split the UI from the backend

-249 is display

-First is straight up java, design the code and write the unit test and that’s it then next one will be taking the data and pushing it to the utilities, utilities return the SVG, then we display the SVG

Utilities 2:30

- basically says what is an svg is, how the different element is formed, populated

Goes after SvgUtility.java class

Generation

4:00

-create origin line (black Line)

-So maybe work on the math?

5 createGraphic (public facing?)

-creating the origin line, base element, compare element

5:40

STD

-equal difference between different things, then we use that to pad the endpoints

6:10

-Min of B, C then substract – STD and max B, C + STD

-pixel wise take those two endpoints, ??? important

-Nominal should be a tick

9:30

-Light and Dark Mode

10:30

Tlm component is the light and dark mode

-should use this on compare service

-But how because this svg is going to created in the backend as a string

11:55

-Big Numbers

-scaling factor

14

Goal is to be flexible enough to show new values

16:20

-For new, Show compare on origin and up and down on RTM

22

-Need it to scale by math

24

RTM value inside the graphic but don’t like but its nice as a “Save the graphic”

30

Rewatch?

31:40

Padded?

32 !

33

-Hard part is the math

-get all these functions defined,

34:20

-SAPH 8 is the DTO? In that place we would call the svg generator for given comparison, generate the graphic object

38:20

Modes

-No capability in Sapphire

-Might be Set comparison

-More later

-End around Some talk

48 maybe later

IMG 2302

Hardest Part is going to be scaling

-More math

Sapphire

Parent Pom

-own project

-only pom.xml important

-strictly for versioning

-any of the dependencies for libraries/services

3 Environment

-FTC, SRC, NASIC, should be maven flags

ELA  
-library into toolkit

-how we change our Mongo paradigm into Toolkit Surf XML

Services

-Spring, multi modal maven projects

Sapphire

-Angular

-npm modules, its own thing

-no depending on parent pom, libraries, services

FF  
-software that analyst can open and use for different tools like Characterize, NotePad+, Keystone

-we care about deploying into FF environment, it manages it own Kubernetes pod

-Sapphire is dependent on catalog and DPS, we utilize their own Mongo DB instance, Ambassador service (going away in newer spins but acts as a traffic router)

-Possibly Sapphire calls Ambassador then goes to the service, so the containers are to the Ambassador (might change to stand alone)