This participant looked mostly diagrams

(M)

00:55 Ok, I think so, so GWMultiPower subclass of GirlWithPower, GWSuperSenses subclass of that (GWMultiPower), emm, so

I: it’s that girl with multi power, and says that girl with supersenses

supersenses, yea, so GirlWithSenses is inside multi power, yea, emm, multi power is inside power, this is what I have seen here, GWMultiPower, girl, GirlWithPower subclass of Hero, emm, okay, so Hero is disjoint with GWMultiPower, ok, so we, emm, alright, let me see, so, well, the 1st, well,

01:58 the problem we have here is the we got GWMultiPower is a subclass of a class, emm, indirectly Hero, which is kind of disjoint with itself, because we see it twice, so this is a, problem, yes? Emm, so…

I: how would you fix it?

02:29 or, or this is, I don’t understand why we have statement 4? Do, what it is trying to model, emm, d, I mean, deleting statement 4 would solve a problem, is it what you mean? Yes? Emm, yea, because, yea, it doesn’t make sen, I’m not quite sure what the, what somebody trying to model, but this is logical false statement, so, I would delete it.

I: emm, any other things, any other ideas, any other thoughts?

03:30 No, I think that’s the problem

03:38 I: again, this is the next one, this time it says that Thunder is unsatisfiable

03:46 em, ok, so, isEnhancedBy is the range SuperPower, emm, it’s kind of what we have here, okay, we don’t know the domain, this thing here (means the empty box of range diagram), and so Thunder is a subclass of isEnhancedBy, of some, alright, this is one of these (looking between texts and diagrams), yea, Thunder isEnhancedBy some GodDevice, emm, GodDevice is subclass of Device, ok, see from there (text), SuperPower and Device are disjoints, emm, Thunder, what if Thunder is not defined yet?

I: em, what do you mean, is not defined?

Honest, yea, honest, we got, so we know Thunder is subclass of enhance by, some GodDevice, yeah, and GodDevice is a subclass of Device, ah, so, alright, alright, so we got a, but the em, because god, so GodDevice, here, ah I see, because em, Thunder, is a kind of subclass, of instances, the, enhanced by some GodDevice, but em, the range of enhanced by is a superpower, and superpower, and GodDevice, oh, superpower and device, god device is subclass of device, em, so it’s not satisfiable because of that

06:51 em, what, again, deleting no. 4, easy way to, easy way to fix it depending on, it will depend on what you are trying to, to model, emm, yea, for me, I think it will be the easiest to remove no. 4

07:18 I: so, this is the next one, this time, the costumed and iceman, they are unsatisfiable

07:27 ok, ok, so I got, these (means text and diagram) are basically identical, yes, so I could, I could just remove this one, so, rather than mapping the two, so, let me look at the diagram, ok, so, let me see, costumed subclass of god race, god race subclass of secret team, alright, emm, yea, Iceman subclass of costumed, ok, I don’t know why we have, ok, I guess because the set of statements, but we, it will be easier if these were merged, yea, ok, so, the bottom less, so we got secret team, is subclass of has member max 4 things, so secret team is a max 4, has member something, ok, and we got a, so I guess, the problem here is the secret team and costumed are, emm, because secret, so, let me see, secret team, and costumed, secret team, ah yes, because emm, costumed is subclass of then secret team, emm, and, yea I see, and this level we are looking for has member 5, and here we are looking for has member max 4, so, for,

09:38 I would say, to satisfy this error, emm, let me see, I could make, well I need to play with these numbers here, in whatever, I could make them both 5 or something else

10:03 I: this one

10:15 ok, so is base of, you see, inverse of has base in

I: yea, just the domain of one property, is the range of the other

Yes, yes, yea, ok, yea, bear is a subclass of has base in only cave, yes? Which means see here, aeroboats, is, is a subclass of, is base of some bear, ok, just some bear, ok, so, alright, so we still got cave and the aeroboat are disjoint, but we know the, the bear, must have a base in a cave, but we also know the, from the inverse and some bears, must have a base in an aeroboats, but cave and aeroboats are disjoints, so it’s not going to work

11:58 it’s going to sounds familiar, but I would move the disjoint again

12:10 ok, the next one

12:16 so let me see, so star is come all individuals, ok, so all individuals resist, so this no label on this one (means the right curve of the resists arrow), and the absorbs, something with no label on here (means the right curve of the absorbs arrow), ok, and the absorb some subclass of fire, so, let me, I just check this, so absorbs is our problem, so absorbs has range, fire, emm, ok, just see, ok, so we know, oh, so, I think we can see already what’s going on, because we got absorbs are written twice, inside the same rectangle, emm, yes, we know it’s, wrong, and

13:30 so depends on what the, so yea, I mean, heat is a type of energy, of, emm, ok, I will do, right, right, because I, maybe I know more about fire than I do superheroes, so I think I would, I think it’s the fire is the subclass of matter, I would solve it that way. Yea, I think that would solve the problem, and I can still have the matter and energy is disjoint, and it will be ok.

14:05 so move fire out of matter

So I would say, yea, what would I say, fire, I do remove no. 4. Fire is not subclass of matter, and then it would solve

14:27 next one

14:30 ok, so, so, one of these, one is here which is, so, is owned by, info centre, where is info centre, I see, I see it, so I see here, so, info centre is owned by something, emm, ok, emm, so, the problem is cache, so, cache is subclass of lab, which is here, armory which is here, and, armory is subclass of is owned by some human race which is this arrow here, now info centre, so info centre is disjoint with RnD, so RnD centre here, and info centre there, emm, so our problem is with cache, because cache is got to be, cache is subclass of lab and armory, let me see, I don’t know why, is a cache allowed? So if, see, more common sense if cache is a subclass, emm, cache is not a subclass of lab, so is not inside here (where cache is now on diagram), emm, I think that would solve the problem 16:53

I: ok, good so no. 3

16:59 No. 3, I think if cache is a, is a subclass of armory, what it is, yea, yea, cache is subclass of armory rather than cache and armory

17:21

17:29 so, so here, so we still got human and alien teams are disjoints, we got robot is subclass of aliens, now we got all of are, hold on, let me see, so we got individuals here, so is mem, is member of, oh, it’s functional, it’s another way of saying this, emm, equals smaller than one, yea, let me see, emm, and a thing is subclass of, till (?) is member of only, robots, and this is a member of, human team, emm, so again, so the, yea, so how to fix it? so we got, oh, emm,

19:06 I think the problem is, is the thing here, isn’t it? it’s the thing, these should be different class names, so subclass of, emm, let me see, I thought it could like team robots, is subclass of this member only robots, something like this, emm, is it? so robot is kind of robot team, yea, robot sounds like an individual, it’s a kind of robot team here, so, emm, subclass of only robot, it’s, I think it’s kind of a bit confusion between sort of class, instance, standing, labels here, something is, so things are, some robot team, I think is member of a robot, what hu, what human team, let me see, emm, robot is inside alien team, emm, yea, emm, I can see what it’s trying to say here, the humans and aliens, robot is part of the alien team, and, where is, yea, I think the answer is to change this from thing to some kind of robot team or human team.

21:21 so, now the last one

21:30 ah, so, wood, so problem here is wood, alright, so, so, alright so wood is greyed out, so no, there could be no individuals in wood, emm, so that’s see what’s going on, and, so, villain, stills only woods, so woods, so I don’t know what’s happening here, because wood, steals only woods, subclass of others, alright, so, so ah this one is others, subclass of others, so others, while others is subclass of villain, I can see that inside here, emm, so ste, so and the domain, and for villain, are the steals, the domain for steals, is villain, so villain steals something, emm, yea, villain is subclass of wood, and what is this unlabelled? This is supposed to be?

I: emm, just something not wood

Oh, oh I see, emm, so not yet, so nothing well, so another nothing can be wood, what they are trying to, say here, so well, emm,

23:50 well steals only woods subclass of others isn’t going to work, because wood and others have no intersection, in this diagram, here, and the reason for that is because villain which is the superclass is disjoint with wood,

24:19 emm, how could I solve that, so what’re they trying to do? Emm, so I guess it’s looking for, steals, yea, emm, I’m not quite sure what they are trying to say, yea, I know the villains do stealing, wood, villain disjoint, sounds fine, emm, others, others been a subclass of villain, sounds strange, I don’t know what, what, what they are trying to say with that, emm, so I think, if I delete 2, if I delete no. 2, then others isn’t stuck inside a class disjoint with wood, so I would delete no. 2

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00:12 Q1

I think it is different, I think I would need more time to identify the patterns, I think the trick with this is you start to notice if something is greyed out, or something is appeared twice, these are clues that something is wrong. So I think it is the case of, I think with more experience I will be able to debug by looking for visual pattern which I don’t get from these (textual) statements.

01:02 Q2

I think just looking at the output, trying to make some kind of inference, probably, I mean I might draw something, not quite like that, but I might draw some kind of hierarchy, or some kind of concept network, trying to understand something.

I: normally you just delete the axiom, or part of the axiom?

I will probably edit or try to work through the reasoning, try to edit path of it, usually, I would say if I am not getting any results, try to relax it, just see if I can predict what comes out, you know, so, yea, we move some kind of restriction of what I am specifying to see if that increases the result sets, so looking that kind of thing.

02:16 Q3

I think it could work if I had time to, if I had enough experience to see the patterns, then I think it could be quite quick. In fact, I think there probably is a set of patterns that indicate an error, and I imagine if this is in a software system, the software could even tell me that this pattern is there, because the certain things, yea are probably a warning, e.g. greyed out areas why you defining things can’t have individuals, maybe, in some cases, might be what you want, but probably not, particularly if you got say, subclasses inside things that cannot have individuals, you will see strange why you defining things in that way. So I think, yea, if it is possible to say put some OWL into a system, get this kind of diagram, I think quite quickly, I think I will be able to spot errors. I think would be fun way to do it, quite productive

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| **Task id by unsatisfiable** | **Solutions** |  |
| **(Mul)** Thunder | Delete axiom 4: SuperPower DisjointWith Device | R |
| **(Mul)** Costumed, Iceman | (1) change >= 4 to >= 5  (2) change =5 to = 4 | R |
| **(Mer)** GWMultiPower, GWSuperSenses | Delete axiom 4: Hero DisjointWith GWMultiPower | R |
| **(Mer)** Wood | Delete axiom 2: Others SubClassOf Villain | R |
| **(Mer)** absorbs | Delete axiom 4: Fire SubClassOf Matter | R |
| **(Mul)** Aeroboat | Delete axiom 4: Cave DisjointWith Aeroboat | R |
| **(Mul)** isMemberOf | In axioms 1 and 2, Thing should be separate names, eg. Change axiom 1 to RobotTeam SubCassOf isMemberOf only Robot | R |
| **(Mer)** Cache | Change axiom 3 to Cache SubClassOf Armory | R |