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## Asked questions and answers

1. How would operators specify abstract high-level requirements like 'security' or ‘reachability’?
   1. Answer: Not statistical properties. True/False properties. Path properties.
      1. Also statistical properties (e.g. congestion), but ignore that for now, focus on path properties.
      2. Graph not best way to specify maybe. More logic. Domain specific language? Graphical programming?
      3. He sends us papers about path properties, to see the requirements
2. What output do you expect from us on point 1 (“Investigate common network requirements (reachability, security)”)?
   1. Is that guaranteed to work?
      1. No but there are 5-6 requirements, fine to stick to this. **Requirements are properties over forwarding tables.**
         1. Isolation
         2. Reachability
         3. Load balancing
         4. Fixed path requirements (should take a specific path vs. any path that goes through router A is good)
3. Which skills does you target audience need to use NetComplete?
   1. Target audience: Network operators
      1. They know network specifications
      2. → Maybe simple language is better for them than graphs, like program language
      3. Or graphical interface for programming languages, graphical programming, maybe nice if it is restricted
4. How should the visualization be used? **Maybe defer this to later, first look at requirements, then discuss this at a later point.**
   1. Maybe there is a way to specify in network which paths are used.
   2. Visualize what requirements have for effects
   3. Visualize forwarding planes that you can get out of this
   4. Add new requirement, visualize how it changes → maybe difference
   5. Long running time is a problem
   6. Synth or verify
5. Can we assume that the topology of the network is fully specified by the user or will we also have to account for 'holes' in the network topology?
   1. Should be fixed, physical network is given.
6. Are the sketches limited as to not allow them to be blown up (overspecified) or unencodable?
   1. Possible to overspecify
   2. Not our concern
   3. Maybe listen to answer again
7. What is the input for our interface? (Are network topology and configuration already given?)
   1. Sketches are also inputted by the net. operator
   2. Use common format (BGP specifications?)
8. Will there be network sketches that include “holes” which NetComplete cannot autocomplete? How should these cases be handled?
   1. Maybe listen to answer again
9. What are the difficulties you’ve encountered so far for designing an interface?
   1. No interface tried, we’re the first try
10. How can we convince the user that NetComplete did the right thing?
    1. Maybe they have implicit requirements in mind, can lead to meaningless output, should have defined more requirements. This is the problem of having a complete specification.
    2. More sophisticated NetComplete could be possible, that asks user about different options.
    3. **Get stupid configuration, go back and specify more requirements (system has guarantees)**
11. Should the visualization be based on the resulting configuration of NetComplete (does this take too long?)
    1. **First concentrate on input, do output later**
    2. Yes, and probably takes too long
12. Do you know (future) users of your product, that we could interview?
    1. Go to network group
    2. Chat with swisscom
    3. Didn’t do that for netcomplete
    4. He’ll ask colleagues for other people.

## Debrief

Idea: Use programming languages, mark like <https://godbolt.org/> which parts of the code correspond to which part of the network.

# TODO

1. **Check what are next dates to meet.**
2. Feedback form? Do we present our ideas to the stakeholders? Forward any new info to Dr. Tsankov
3. Sketch ideas (see course)
4. Where is our blog? Time sheets aka weekly salary distribution?