This document is to list all of the corrections requested from the viva on the 24th January 2015. The table below includes each correction ad verbatim from the document provided shortly after the viva and includes columns to highlight the work I have done to address them. Where possible, I have included the amended text (in italics) from the revised thesis. If this was not possible, then I have written a short paragraph on the changes made. The page and paragraph that the change can be found on is also listed, as is room for any comments that may be relevant.

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| --- | --- | --- | --- | --- |
| **Examiner's Comment** | **Changes Made** | **Page** | **Paragraph** | **Additional Comments** |
| Base line of WSN sending out all data to base station without DPs, i.e. a  simple mutlihop network that sends images directly out via the  shortest route and the base station does the classification. You may  want to consider the base station having MK in one scenario and  HK in another, i.e. two baselines. |  |  |  |  |
| Rerun all experiments with the additional scenarios. You should report  the total number of images that were generated, the number that  arrived at the base station and the (ideally) number that were  dropped. |  |  |  |  |
| Formalise the description of the experimental design clearly stating what  variables were kept constant and which were measured. The  simulation chapter needs to include (in addition to the verbal  explanation) more formal software documentation of the simulation  system, such as with appropriate UML diagramming methods and  maybe also pseudo-code. This includes making clear how particular  random generator parameters were set – i.e. where the values  came from and how used. |  |  |  |  |
| Error bars on graphs, although box and whisker plots with the mean  indicated would be more appropriate |  |  |  |  |
| Keep figures with the text that describe them |  |  |  |  |
| Remove claims about energy usage in the network |  |  |  |  |
| Separate out architecture design from scenarios of its use |  |  |  |  |
| Make it explicit that the DA will be running on a laptop/desktop computer |  |  |  |  |
| State what your architecture is capable of doing that OGC-SWE is not,  particularly compared to deployments of OGC-SWE that have been  used for capturing animal images |  |  |  |  |
| Clarify role of image processing and use of templates. Bring this  discussion into Chapter 3 |  |  |  |  |
| When explaining the image processing functionality make clear the  distinction between classifying an image as interesting or  uninteresting and classification in the sense of determining a  particular species. |  |  |  |  |
| Make a clear statement regarding what has actually been implemented  and is a part of the completed system as opposed to functionality  which you have experimented but not made operational – thus  explain that species classification has not been implemented in any  particularly effective way in the final system, but you can explain how it would be done. |  |  |  |  |
| With regard to classification with templates, how would templates be  matched if objects are at different angles, distance from the  camera, etc? |  |  |  |  |
| Throughout the thesis make it clear whether functionality relies on image  classification to determine a species (that has not been  implemented) or identifying potentially interesting images |  |  |  |  |
| Provide link to Triton source repository |  |  |  |  |
| Correctly use your definition for accuracy (page 56) |  |  |  |  |
| Make clear that adding rules to Drools requires specialist knowledge of  the drools programming language |  |  |  |  |
| Indicate the circumstances that could lead to a rule being added to  Drools – where has the required information / knowledge come  from? |  |  |  |  |
| The description of the architecture needs to be accompanied by  software documentation diagrams or code (such as UML interaction  and activity diagrams and / or pseudo-code) that makes clear the  main components of the system (both software and human  interventions) and how they interact with each other. |  |  |  |  |
| SSN ontology is both sensor-centric and observation-centric. |  |  |  |  |
| Introduce SUMO as a general purpose upper ontology (with appropriate  reference(s)). Then go on to state how it has been specialised for  sensor network deployments |  |  |  |  |
| Remove claim that your ontology is modular. You reuse existing terms  by importing them, but it is not modular |  |  |  |  |
| Need a critical discussion as to why SSN does not meet your needs |  |  |  |  |
| Correct and move to appropriate part of the thesis, probably chapter 3. I would suggest removing the term global knowledge. |  |  |  |  |
| combine the two graphs onto a single plot. |  |  |  |  |
| Separate out UK wet and dry and provide humidity values for the  experiment (if you have them). |  |  |  |  |
| Include the values for when DKFC loses signal |  |  |  |  |
| When stating that there are multiple tools, provide more than one  citation |  |  |  |  |
| Remove the acronyms ‘LK’ and ‘GK’ and replace with their expanded  terms |  |  |  |  |
| Don’t use the term scientific observation when you specifically mean an ecological observation |  |  |  |  |
| Remove et al from references |  |  |  |  |
| Provide a map of the location of the field centre in its wider context, i.e.  the part of the globe, in Chapter 1. Improve resolution of Fig 3.2  and highlight regions on picture. |  |  |  |  |
| Remove claim at end of §3.3.1 that, based on your experiment, you can  conclude that other experiments would give you the same results in  the UK and Malaysia |  |  |  |  |
| Field names in Listing 4.3 for set.csv don’t match those given in Listing  4.4 |  |  |  |  |
| Turn the heading ‘Findings’ in §5.1.2 into the subheading §5.1.3 |  |  |  |  |
| cite all the commercial cameras considered |  |  |  |  |
| 6.1 provide a picture of the Buckeye cameras used with their case |  |  |  |  |
| 6.2 State why you are only taking 2 pictures when up until this point  you have been working with 3 pictures |  |  |  |  |
| Listing 6.4 remove the setting of the scientific name as you are not sure  which of the two species it is |  |  |  |  |
| State how many rules were used in the LORIS deployment and an  indication of the accuracy of the system |  |  |  |  |
| Indicate which part of the interview in appendix E is shown in appendix  F |  |  |  |  |
| p126 rewrite paragraph about global knowledge and local knowledge of  clouded leopard sleeping patterns |  |  |  |  |
| Citations for Weka and J48 |  |  |  |  |
| Clarify 400 hour claim on p158 (the new simulation experiments will give  you a proper value for this against the baseline when there is no  intelligence in the network) |  |  |  |  |
| Typos/Minor Corrections | All addressed |  |  |  |