Corrections

All Spelling punctuation and grammar: All of Bruno’s “Minor corrections” carried out as requested.

Spelling \ Grammar \ layout errors as highlighted in Dr Chen’s notes in the thesis also corrected

Other, trivial, grammar \ spelling points also revised.

Any questions not addressed in this document were answered at the viva.

# Chapter one:

Add summary of published papers – section added at end of chapter

Expand Upon: the consensus of the research is that ontology will save money and improve customer service.

Clarified that the work is broader than the UK rail industry

Summarise academic innovations of this project: aims and objectives section clarified

This thesis will first investigate the current state of data integration in the rail domain, considering both solutions that employ ontology alongside more traditional techniques. The benefits of using ontology for data integration in the rail domain will then be assessed, taking into account progress made in other domains. This thesis will then examine the barriers to using ontology for data integration in the rail domain, before considering methods for overcoming those barriers. This thesis will then summarise tooling created to overcome the known barriers to adoption, and how these may be used within a typical industry workflow.

# Chapter two:

More recent railML reference found. Previous reference (2010) was valid, however a newer reference was requested.

Examples were added for the formats discussed.

RaCoOn defined when first mentioned.

Information Security: section re-titled and clarified

Section Headings updated.

Formatting

Reference to turtle added as per Bruno request in chapter 4

# Chapter three:

(Only grammar \ spelling corrections were required in this chapter)

# Chapter Four:

**Additional information as to the academic purpose added in the introduction**

Formatting changes as requested

Removed multiple screen shots of manual data entry tool and replaced with new diagram. The screen shots were moved to an appendix, as requested. The chapter text was updated to reflect this.

CIF file format example provided and explained

Clarified memory footprint

Generic References to “The Program” removed or clarified

Processing time figure recreated with new data

Processing time data added as table

Processing time linearity clarified (i.e. it’s not linear) and further discussed in results section.

License added at github

Further work extended

# Chapter Five:

Rename Chapter: Use of a Middleware Layer with Ontologies

Diagrams clarified and expanded

Future work expanded: scalability and datastore access speeds are particular is discussed.

**Academic Questions set out in introduction (subsection entitled: Questions Considered)**

# Chapter Six:

**Academic questions further considered as part of the introduction**

Role of commercial partners clarified and the proportion of the work carried out by the candidate clarified, as discussed at the viva.

Define PCIDR : Track based Point Control Inhibit, and Detection Repeat (PCIDR) and Control

Define RETS: RETS is a rail network simulator used by the project's commercial partner, capable of micro level simulation and of outputting absolute positions, where it has the necessary data.

Diagrams (figures 6.7-6.9) revised and made smaller

Meaning of “Points” clarified – a synonym for switches or turnouts in this context.

Further work selection expanded

dotNetRDF performance considered