OntoDiff: era251 vs era230

==== === === [ OntoRail Diff ] === === ====  
 • target: era251 (http://ontorail.org/src/ERA/era251/)  
 • versus: era230 (http://ontorail.org/src/ERA/era230/)  
 • entity types considered: ['Object', 'ObjectProperty', 'DatatypeProperty']  
 • performed: 2023-02-17 13:49:30 +0000  
 • duration: 2.0 sec  
 • OntoDiff version date: 2023-02-17 12:04:28  
 • Ignored predicates: xmi:ea\_localid, xmi:lowerValue\_\_id, xmi:upperValue\_\_id, xmi:source\_\_isNavigable, xmi:coords\_\_ordered, xmi:coords\_\_scale, xmi:containment\_\_position, xmi:virtualInheritance, xmi:target\_\_isNavigable, xmi:source\_\_idref, xmi:target\_\_idref, xmi:type\_\_idref, xmi:labels\_\_rb, xmi:type, xmi:visibility, xmi:isUnique, xmi:upperValue\_\_type, xmi:isDerived, xmi:isDerivedUnion, xmi:isOrdered, xmi:isReadOnly, xmi:isStatic  
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# Summary

## Object entities

### 37 Object in era251:

Certificate, "Contact Line System", "ERA Feature", "ETCS Level", FreightTerminal, "Gradient Curve", "Infrastructure manager", Junction, "Line Reference", Loop, Manufacturer, "National Railway Line", "Net Element", "Net Relation", "Operational Point", "Physical Implementation Feature", Platform, RootObject, "Section Of Line", Siding, Signal, "Speed Section", "Spot Location", Station, "Stopping Place", "Topological Object", Track, "Train Detection System", Tunnel, Vehicle, "Vehicle Keeper", "Vehicle Type", border, "linear location", "over crossing", "principal location", switch

### 37 Object NEW from era230:

Certificate, "Contact Line System", "ERA Feature", "ETCS Level", FreightTerminal, "Gradient Curve", "Infrastructure manager", Junction, "Line Reference", Loop, Manufacturer, "National Railway Line", "Net Element", "Net Relation", "Operational Point", "Physical Implementation Feature", Platform, RootObject, "Section Of Line", Siding, Signal, "Speed Section", "Spot Location", Station, "Stopping Place", "Topological Object", Track, "Train Detection System", Tunnel, Vehicle, "Vehicle Keeper", "Vehicle Type", border, "linear location", "over crossing", "principal location", switch

### 0 Object REMOVED from era230:

### 0 Object MODIFIED from era230:

## ObjectProperty entities

### 106 ObjectProperty in era251:

"Accepted TSI compliant pantograph heads", "Accepted other pantograph heads", "Advised required number of active GSM-R mobiles (EDOR) or simultaneous communication session on-board for ETCS Level 2 (or level 3) needed to perform radio block centre handovers without having an operational disruption", "Category of line", "ETCS M\_version", "ETCS baseline", "ETCS equipment level", "ETCS infill installed lineside", "ETCS level", "ETCS level for degraded situation", "ETCS system compatibility", "End of tunnel", "Energy supply system", "Existence and TSI compliance of limits in harmonics in the traction current of vehicles", "Existence and TSI compliance of rules for magnetic fields emitted by a vehicle", "Fire category of rolling stock required", "GSM-R networks covered by a roaming agreement", "GSM-R radio data communication", "GSM-R version", Gauging, "Height of platform", "Load Capability", "Maximum amount of sand", "Minimum axle load by vehicle category", "National line identification", "Nature of Section of Line", "Nominal track gauge", "Normal running direction", "Operational Point at end of Section of Line", "Operational Point at start of Section of Line", "Optional GSM-R functions", "Other radio systems installed (Radio Legacy Systems)", "Other train protection, control and warning systems for degraded situation", "Part of a Railway freight corridor", "Permitted contact strip material", "Radio system compatibility data", "Radio system compatibility voice", "Rail inclination", "Railway location of Operational point", "Section with train detection limitation, only for the French network", "Standard combined transport profile number for semi-trailers", "Standard combined transport profile number for swap bodies", "Start of tunnel", "TEN classification (of track, of platform, of siding)", "TSI Compliance of rules on sand characteristics", "TSI compliance of Ferromagnetic characteristics of wheel material required", "TSI compliance of maximum permitted distance between two consecutive axles", "TSI compliance of maximum permitted impedance between opposite wheels of a wheelset", "TSI compliance of rules for metal-free space around wheels", "TSI compliance of rules for vehicle metal construction", "TSI compliance of rules on combination of RST characteristics influencing shunting impedance", "TSI compliance of rules on shunt assisting devices", "TSI compliance of rules on the use of composite brake blocks", "TSI compliance of sanding", "Train protection legacy system", "Type of contact line system", "Type of operational point", "Type of track circuits to which specific checks are needed", "Type of train detection system", "Use of eddy current brakes", "Use of magnetic brakes", "authorized country", "axle bearing condition monitoring", "contact line system", "data GSM-R network", "element A", "element B", "element part", "end coupling type", "etcs level", "fire safety category", "has abstraction", "has implementation", "has signal", "hot axle box detector direction", "in country", "infrastructure manager", manufacturer, "manufacturing country", navigability, "net element", "net element reference", "not applicable", "not yet available", "operational restriction", osmClass, "parking brake type", "part of", "passes through tunnel", platform, "position on A", "position on B", "previous vehicle type", "quieter route exempted country", siding, "snow ice hail conditions", "supported platform height", "thermal capacity TSI reference", track, "train detection system", "vehicle category", "vehicle keeper", "vehicle subcategory", "vehicle type", "voice GSM-R network", "wheelset gauge changeover facility"

### 106 ObjectProperty NEW from era230:

"Accepted TSI compliant pantograph heads", "Accepted other pantograph heads", "Advised required number of active GSM-R mobiles (EDOR) or simultaneous communication session on-board for ETCS Level 2 (or level 3) needed to perform radio block centre handovers without having an operational disruption", "Category of line", "ETCS M\_version", "ETCS baseline", "ETCS equipment level", "ETCS infill installed lineside", "ETCS level", "ETCS level for degraded situation", "ETCS system compatibility", "End of tunnel", "Energy supply system", "Existence and TSI compliance of limits in harmonics in the traction current of vehicles", "Existence and TSI compliance of rules for magnetic fields emitted by a vehicle", "Fire category of rolling stock required", "GSM-R networks covered by a roaming agreement", "GSM-R radio data communication", "GSM-R version", Gauging, "Height of platform", "Load Capability", "Maximum amount of sand", "Minimum axle load by vehicle category", "National line identification", "Nature of Section of Line", "Nominal track gauge", "Normal running direction", "Operational Point at end of Section of Line", "Operational Point at start of Section of Line", "Optional GSM-R functions", "Other radio systems installed (Radio Legacy Systems)", "Other train protection, control and warning systems for degraded situation", "Part of a Railway freight corridor", "Permitted contact strip material", "Radio system compatibility data", "Radio system compatibility voice", "Rail inclination", "Railway location of Operational point", "Section with train detection limitation, only for the French network", "Standard combined transport profile number for semi-trailers", "Standard combined transport profile number for swap bodies", "Start of tunnel", "TEN classification (of track, of platform, of siding)", "TSI Compliance of rules on sand characteristics", "TSI compliance of Ferromagnetic characteristics of wheel material required", "TSI compliance of maximum permitted distance between two consecutive axles", "TSI compliance of maximum permitted impedance between opposite wheels of a wheelset", "TSI compliance of rules for metal-free space around wheels", "TSI compliance of rules for vehicle metal construction", "TSI compliance of rules on combination of RST characteristics influencing shunting impedance", "TSI compliance of rules on shunt assisting devices", "TSI compliance of rules on the use of composite brake blocks", "TSI compliance of sanding", "Train protection legacy system", "Type of contact line system", "Type of operational point", "Type of track circuits to which specific checks are needed", "Type of train detection system", "Use of eddy current brakes", "Use of magnetic brakes", "authorized country", "axle bearing condition monitoring", "contact line system", "data GSM-R network", "element A", "element B", "element part", "end coupling type", "etcs level", "fire safety category", "has abstraction", "has implementation", "has signal", "hot axle box detector direction", "in country", "infrastructure manager", manufacturer, "manufacturing country", navigability, "net element", "net element reference", "not applicable", "not yet available", "operational restriction", osmClass, "parking brake type", "part of", "passes through tunnel", platform, "position on A", "position on B", "previous vehicle type", "quieter route exempted country", siding, "snow ice hail conditions", "supported platform height", "thermal capacity TSI reference", track, "train detection system", "vehicle category", "vehicle keeper", "vehicle subcategory", "vehicle type", "voice GSM-R network", "wheelset gauge changeover facility"

### 0 ObjectProperty REMOVED from era230:

### 0 ObjectProperty MODIFIED from era230:

## DatatypeProperty entities

### 229 DatatypeProperty in era251:

"Acceleration allowed at level crossing", "Additional information on network characteristics", "Areas of use of the platform boarding aid", "Automatic dropping device required", "Availability by the IM of additional information", "Belonging to a quieter route", "Cant deficiency", "Compliance of structures with the High Speed Load Model (HSLM) dynamic load model", "Compliance of the tunnel with INF TSI", "Contact force permitted", "Cross section area", "Current or power limitation on board required", "Details on roaming to public networks", "Diesel or other thermal traction allowed", "Distance between signboard and phase separation ending", "Document with the conditions for the use of eddy current brakes", "Document with the conditions for the use of magnetic brakes", "Document with the procedure(s) for static and dynamic route compatibility checks", "Document with the procedure(s) related to the type of track circuits declared in 1.1.1.3.7.1.2", "Document with the transversal section of the particular points requiring specific checks", "Documents available by the IM relating to braking performance", "EC declaration of verification for track (CCS)", "EC declaration of verification for track (ENE)", "EC declaration of verification for track/siding [INF]", "EC declaration of verification for tunnel (SRT)", "EI declaration of demonstration for track (ENE)", "EI declaration of demonstration for track/siding [INF]", "EI declaration of demonstration for tunnel (SRT)", "ETCS data communication application", "ETCS infill necessary for line access", "ETCS national applications", "ETCS national packet 44 application implemented", "ETCS on-board implementation", "ETCS optional functions", "Energy supply system TSI compliant", "Existence of ballast", "Existence of electric shore supply", "Existence of emergency plan", "Existence of external cleaning facilities", "Existence of level crossings", "Existence of operating restrictions or conditions", "Existence of other train protection, control and warning systems installed", "Existence of platform assistance for starting train", "Existence of refuelling", "Existence of roaming to public networks", "Existence of rules and restrictions of a strictly local nature", "Existence of rules on on-board flange lubrication", "Existence of sand restocking", "Existence of severe climatic conditions", "Existence of switch over between different protection, control and warning systems while running", "Existence of switch over between different radio systems", "Existence of toilet discharge", "Existence of trackside hot axle box detector (HABD)", "Existence of train detection system fully compliant with the TSI", "Existence of water restocking", "GPRS for ETCS", "GPRS implementation area", "GSM-R sets in driving cab", "Generation of trackside HABD", "Gradient for stabling tracks", "Gradient profile", "IM's code", "Identification of siding", "Identification of track", "Identification of trackside HABD", "Indication whether tilting functions are supported by ETCS", "Information on phase separation", "Information on system separation", "Length (of Section of Line, of Tunnel, of Siding, Usable lenght of Platform)", "Maximum altitude", "Maximum braking distance requested", "Maximum contact wire height", "Maximum current at standstill per pantograph", "Maximum distance between end of train and first axle", "Maximum permitted distance between two consecutive axles in case of TSI non-compliance", "Maximum permitted height of the flange", "Maximum permitted impedance between opposite wheels of a wheelset when not TSI compliant", "Maximum permitted speed", "Maximum train current", "Maximum train deceleration", "Minimum contact wire height", "Minimum permitted axle load", "Minimum permitted distance between first and last axle", "Minimum permitted distance between two consecutive axles", "Minimum permitted height of the flange", "Minimum permitted thickness of the flange", "Minimum permitted wheel diameter", "Minimum permitted width of the rim", "Minimum radius of horizontal curve", "Minimum wheel diameter for fixed obtuse crossings", "Name of Operational point", "National classification for load capability", "National fire category of rolling stock required", "Need for more than one train protection, control and warning system required on board", "No GSM-R coverage", "OP TAF/TAP primary code", "Permission for regenerative braking", "Phase separation", "Railway location of particular points requiring specific checks", "Railway location of structures requiring specific checks", "Railway location of trackside HABD", "Reference of the documents regarding the rules or restrictions of a strictly local nature available by the IM", "Reference to a document available from the IM with precise description of the tunnel", "Requirements for number of raised pantographs and spacing between them, at the given speed", "Sanding override by driver required", "Specific information", "Steady red lights required", "System separation", "TEN GIS identity", "TSI compliance of in service values for switches and crossings", "Temperature range (maximum)", "Temperature range (minimum)", "Trackside HABD TSI compliant", "Train integrity confirmation from on-board necessary for line access", "Tunnel identification", "Type of track gauge changeover facility", "Umax2 for lines referred to in sections 7.4.2.2.1 and 7.4.2.11.1 of Regulation (EU)1301/2014.", "Unique OP ID", "Use of flange lubrication forbidden", "Use of group 555", "alternative name", "altitude range", "altitude range detail", "axle spacing", "boarding aids", "brake weight percentage", "cant defficiency", "catenary max rated current", certificate, "composite brake block retrofitted", "conditional regenerative brake", "conditions train formation", "dangerous goods tank code", "design mass in working order", "design mass under exceptional payload", "design mass under normal payload", "driving cabs", "eddy current brake prevention", "emergency braking", "end intrinsic coordinate", "energy meter installed", "energy supply max power", "ferromagnetic wheel material", "fixed seats", "flange lubrication fitted", "has automatic dropping device", "has cant defficiency compensation", "has current limitation", "has lubrication device prevention", "has parking brake", "has sanding prevention", "has shunting restrictions", "has train integrity confirmation", "has wheel slide protection system", "is bridge", "is switchable", "is tunnel", kilometer, "letter marking", "linear coordinate", "loadng platform height", "magnetic brake prevention", "mass per wheel", "maximum average deceleration", "maximum brake thermal energy capacity", "maximum design speed", "maximum length vehicle nose", "maximum locomotives coupled", "maximum permissible speed", "maximum service break", "maximum speed and cant deficiency", "maximum speed empty", "meets requirement vehicle authorization", "minimum concave vertical radius", "minimum convex vertical radius", "minimum radius of vertical curve", "minimum vehicle impedance", netElementPosition, "non coded restrictions", "number elements rake freight wagons", "number of pantographs in contact with OCL", "number of toilets", "ocl type", "parking brake", "parking brake mandatory", "parking brake maximum gradient", "pass-by noise level", "permissible payload", "platform id", "portable boarding aids", "position begin", "position end", "prevent regenerative brake use", "priority seats", "prm accessible toilets", "quasi static guiding force", "radio switch over special conditions", "reference pass-by noise level", "relative position", "shortest distance between pantographs in contact with OCL", "sleeping places", "start intrinsic coordinate", "starting noise level", "static axle load in working order", "static axle load under exceptional payload", "static axle load under normal payload", "stationary noise level", "structural category", "thermal capacity distance", "thermal capacity gradient", "thermal capacity speed", "thermal capacity time", "total vehicle mass", "train control switch over special conditions", "transportable on ferry", "tsi compliant", "type version number", "vehicle contact force", "vehicle kinematic gauge other", "vehicle max sanding output", "vehicle number", "vehicle pantograph head", "vehicle series", "vehicles composing fixed formation", "voice operational communication implementation", voltage, "wheel set gauge transformation method", "wheelchair sleeping spaces", "wheelchair spaces"

### 229 DatatypeProperty NEW from era230:

"Acceleration allowed at level crossing", "Additional information on network characteristics", "Areas of use of the platform boarding aid", "Automatic dropping device required", "Availability by the IM of additional information", "Belonging to a quieter route", "Cant deficiency", "Compliance of structures with the High Speed Load Model (HSLM) dynamic load model", "Compliance of the tunnel with INF TSI", "Contact force permitted", "Cross section area", "Current or power limitation on board required", "Details on roaming to public networks", "Diesel or other thermal traction allowed", "Distance between signboard and phase separation ending", "Document with the conditions for the use of eddy current brakes", "Document with the conditions for the use of magnetic brakes", "Document with the procedure(s) for static and dynamic route compatibility checks", "Document with the procedure(s) related to the type of track circuits declared in 1.1.1.3.7.1.2", "Document with the transversal section of the particular points requiring specific checks", "Documents available by the IM relating to braking performance", "EC declaration of verification for track (CCS)", "EC declaration of verification for track (ENE)", "EC declaration of verification for track/siding [INF]", "EC declaration of verification for tunnel (SRT)", "EI declaration of demonstration for track (ENE)", "EI declaration of demonstration for track/siding [INF]", "EI declaration of demonstration for tunnel (SRT)", "ETCS data communication application", "ETCS infill necessary for line access", "ETCS national applications", "ETCS national packet 44 application implemented", "ETCS on-board implementation", "ETCS optional functions", "Energy supply system TSI compliant", "Existence of ballast", "Existence of electric shore supply", "Existence of emergency plan", "Existence of external cleaning facilities", "Existence of level crossings", "Existence of operating restrictions or conditions", "Existence of other train protection, control and warning systems installed", "Existence of platform assistance for starting train", "Existence of refuelling", "Existence of roaming to public networks", "Existence of rules and restrictions of a strictly local nature", "Existence of rules on on-board flange lubrication", "Existence of sand restocking", "Existence of severe climatic conditions", "Existence of switch over between different protection, control and warning systems while running", "Existence of switch over between different radio systems", "Existence of toilet discharge", "Existence of trackside hot axle box detector (HABD)", "Existence of train detection system fully compliant with the TSI", "Existence of water restocking", "GPRS for ETCS", "GPRS implementation area", "GSM-R sets in driving cab", "Generation of trackside HABD", "Gradient for stabling tracks", "Gradient profile", "IM's code", "Identification of siding", "Identification of track", "Identification of trackside HABD", "Indication whether tilting functions are supported by ETCS", "Information on phase separation", "Information on system separation", "Length (of Section of Line, of Tunnel, of Siding, Usable lenght of Platform)", "Maximum altitude", "Maximum braking distance requested", "Maximum contact wire height", "Maximum current at standstill per pantograph", "Maximum distance between end of train and first axle", "Maximum permitted distance between two consecutive axles in case of TSI non-compliance", "Maximum permitted height of the flange", "Maximum permitted impedance between opposite wheels of a wheelset when not TSI compliant", "Maximum permitted speed", "Maximum train current", "Maximum train deceleration", "Minimum contact wire height", "Minimum permitted axle load", "Minimum permitted distance between first and last axle", "Minimum permitted distance between two consecutive axles", "Minimum permitted height of the flange", "Minimum permitted thickness of the flange", "Minimum permitted wheel diameter", "Minimum permitted width of the rim", "Minimum radius of horizontal curve", "Minimum wheel diameter for fixed obtuse crossings", "Name of Operational point", "National classification for load capability", "National fire category of rolling stock required", "Need for more than one train protection, control and warning system required on board", "No GSM-R coverage", "OP TAF/TAP primary code", "Permission for regenerative braking", "Phase separation", "Railway location of particular points requiring specific checks", "Railway location of structures requiring specific checks", "Railway location of trackside HABD", "Reference of the documents regarding the rules or restrictions of a strictly local nature available by the IM", "Reference to a document available from the IM with precise description of the tunnel", "Requirements for number of raised pantographs and spacing between them, at the given speed", "Sanding override by driver required", "Specific information", "Steady red lights required", "System separation", "TEN GIS identity", "TSI compliance of in service values for switches and crossings", "Temperature range (maximum)", "Temperature range (minimum)", "Trackside HABD TSI compliant", "Train integrity confirmation from on-board necessary for line access", "Tunnel identification", "Type of track gauge changeover facility", "Umax2 for lines referred to in sections 7.4.2.2.1 and 7.4.2.11.1 of Regulation (EU)1301/2014.", "Unique OP ID", "Use of flange lubrication forbidden", "Use of group 555", "alternative name", "altitude range", "altitude range detail", "axle spacing", "boarding aids", "brake weight percentage", "cant defficiency", "catenary max rated current", certificate, "composite brake block retrofitted", "conditional regenerative brake", "conditions train formation", "dangerous goods tank code", "design mass in working order", "design mass under exceptional payload", "design mass under normal payload", "driving cabs", "eddy current brake prevention", "emergency braking", "end intrinsic coordinate", "energy meter installed", "energy supply max power", "ferromagnetic wheel material", "fixed seats", "flange lubrication fitted", "has automatic dropping device", "has cant defficiency compensation", "has current limitation", "has lubrication device prevention", "has parking brake", "has sanding prevention", "has shunting restrictions", "has train integrity confirmation", "has wheel slide protection system", "is bridge", "is switchable", "is tunnel", kilometer, "letter marking", "linear coordinate", "loadng platform height", "magnetic brake prevention", "mass per wheel", "maximum average deceleration", "maximum brake thermal energy capacity", "maximum design speed", "maximum length vehicle nose", "maximum locomotives coupled", "maximum permissible speed", "maximum service break", "maximum speed and cant deficiency", "maximum speed empty", "meets requirement vehicle authorization", "minimum concave vertical radius", "minimum convex vertical radius", "minimum radius of vertical curve", "minimum vehicle impedance", netElementPosition, "non coded restrictions", "number elements rake freight wagons", "number of pantographs in contact with OCL", "number of toilets", "ocl type", "parking brake", "parking brake mandatory", "parking brake maximum gradient", "pass-by noise level", "permissible payload", "platform id", "portable boarding aids", "position begin", "position end", "prevent regenerative brake use", "priority seats", "prm accessible toilets", "quasi static guiding force", "radio switch over special conditions", "reference pass-by noise level", "relative position", "shortest distance between pantographs in contact with OCL", "sleeping places", "start intrinsic coordinate", "starting noise level", "static axle load in working order", "static axle load under exceptional payload", "static axle load under normal payload", "stationary noise level", "structural category", "thermal capacity distance", "thermal capacity gradient", "thermal capacity speed", "thermal capacity time", "total vehicle mass", "train control switch over special conditions", "transportable on ferry", "tsi compliant", "type version number", "vehicle contact force", "vehicle kinematic gauge other", "vehicle max sanding output", "vehicle number", "vehicle pantograph head", "vehicle series", "vehicles composing fixed formation", "voice operational communication implementation", voltage, "wheel set gauge transformation method", "wheelchair sleeping spaces", "wheelchair spaces"

### 0 DatatypeProperty REMOVED from era230:

### 0 DatatypeProperty MODIFIED from era230:

# Modified Entities

## Object entities

➱ No modification occured in this type of Entities

## ObjectProperty entities

➱ No modification occured in this type of Entities

## DatatypeProperty entities

➱ No modification occured in this type of Entities