

Glossary

UIC Euro-Interlocking Standard

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GLOSSARY

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Abstract This document contains a module exported from the GENERIS DOORS database. It contains all requirements of participating railways and is meant to be used as informative. The detailed requirements for each railway are available directly from the Euro-Interlocking database.					

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Term	Main
	1 Introduction
	1.1 Background
	The Euro-Interlocking Standards (EIS) comprise the Euro-Interlocking Requirements (EIR) and the Euro-Interlocking Interface Specifications (EIS). All EIS documents are produced in accordance with the Euro-Interlocking Project Declaration version 2.1 (and appendices), which defines the objectives and aims of the Euro-Interlocking project. EIS contains a set of generic requirements for a generic product and a generic application.
	1.2 Purpose
	The purpose of this document is to define the terms and abbreviations in EIS.
	A guideline has been to define terms which are either new definitions or whose definition in the EIS context may differ from ordinary usage or from usage in a specific country.
	1.3 Scope
	The scope of this document is a list and definitions of the main terms and abbreviations in the Euro-Interlocking project.
	1.4 Structure
	A diagram in the High-Level Requirements document shows the current structure of the documents comprising the Euro-Interlocking Standards (EIS).
	1.5 Definition of terms and phrases
	The Oxford Dictionary shall be the basis for the interpretation of all words except terms and phrases that EIS defines. SELRED defines phrases of special relevance to EIS.
	Sources of the terms and definition in this document include glossaries of other signalling projects and development groups and the Euro-Interlocking project itself.
	1.6 Unique identification of each statement within EIS
	To allow the unique identification of terms within EIS, the prefix 'G' precedes the number for each object in this document. In this document, the column "Term Type" shows whether the term is a "definition" or a "designation" according to SELRED. A "designation" is a fundamental term forming a basic building block within the Euro-Interlocking term definitions. It is defined without the use of other Euro-Interlocking terms and specifies the meaning of a word in the context

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Term	Main
	of Euro-Interlocking.
	The column "Source" shows the origin of the term.
2 Glossary of Terms	
2.1 A	
Action	An event that is required to change states
Activated	A physical or reported state for an item of equipment when operating
Activation Zone	An area of tracks in rear of a level crossing, where the detection of a vehicle may activate a level crossing
Alarm	An audible or visual indication of possible danger
Approach Zone	A logical construction within an interlocking system representing the track sections in rear of a route entry signal
Artificially set	A logical state for a track element within an interlocking that is set independently of the detected value from the field
Aspect - Cancelled	The aspect shown on a shunting signal when the signal is not in use (local shunting in progress or just cancelled)
Aspect - Distant	The aspect shown on a distant signal
Aspect - Drive on Sight	A restrictive aspect shown on a main signal, provided to warn a train driver that the route ahead is occupied or that conditions for normal main proceed aspect are not satisfied.
Aspect - Flank Protecting	A 'stop' aspect that permits a signal to be used as flank protection for a route.
Aspect - Main	The aspect shown on a main signal when displaying aspects for main route types.
Aspect - Proceed With Caution	A restrictive aspect shown on a shunting signal, provided to warn a train driver that the route ahead is occupied or that certain conditions for a normal proceed aspect are not satisfied.
Aspect - Permissive	An aspect sequence displayed by any capable signal to indicate that a driver may pass it. This includes the 'cancelled signal' aspects of certain shunting signals.
Aspect - Proceed	A signal aspect indicating to the train driver that the signal may be passed within the constraints of the aspect displayed.
Aspect Sequence	The displayed order of signal aspects
Aspect - Shunting	The aspect shown on a shunting signal when displaying aspects for shunting route types.
Aspect - Signal	The appearance of a lineside signal, viewed from the direction of approaching train, or the appearance of a cab signal
Aspect - Stop Automatic	Signal aspect that is an unconditional instruction to stop at the signal.
Automatic Mode	Independent of external drive. A function whereby a route operated signal or signals may be made to work automatically
Automatic - Operation (Signal)	See 'Route - Automatic Working'
Automatic Route	Uncontrolled (automatic) signals, or controlled signals operating in automatic mode, that display aspects in accordance with track (TVP) status only. A function for the setting of a route without action by the signaller, and based upon a stored timetable, train running

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Term	Main
Setting	information, defined priority, selection criteria and operating algorithms. See 'ARS'
Automatic - Signal (Block)	A signal positioned on the line to provide protection for an automatic block section within a line.
Automatic Train Protection System	A safety system that enforces compliance with signalled aspects, speeds and / or movement authority limits.
Automatic Warning System	Electro-magnetic equipment placed in the track at a set distance on the approach to a signal to transmit a simple warning to a passing train driver.
Axle Counting System	A system using counting points and a count evaluator which detects the occupancy of a TVP section by comparing the number of axles which enter the section with the number of axles which leave the section. See also 'TVP'
	2.2 B
Balise	An apparatus in the track by means of which data are transmitted to a train to up-date the train-borne automatic protection equipment regarding the track and signal conditions of the line ahead
Barrier	A movable obstacle which is placed across the roadway to deter road traffic and pedestrians from using the level crossing.
Barrier Machine	An assembly, within a casing, of the apparatus for operating a level crossing barrier from a source of power, usually electric.
Basic Command	A command that the control module, the diagnostic system, or a trackside panel sends to a track element.
Basic Status	A status that a track element sends to the control module, the diagnostic system, or a trackside panel.
Battery	A chemically derived device providing electrical power independently of any other source
Block	A section of track in which only one train may safely be present
Block - Automatic Line	A block system in which the fixed signals for the block section are operated automatically by the passage of trains.
Block - Route Initiated Line	A type of line block that has to be initiated by a route set toward the line in order to enable the display of permissive aspects on block signals.
Block - Section	That section of line between the section signal of one block post and the home signal of the next block post.
Block - Signal	Signal ensuring the protection of trains in a block section.
Block Travel Direction	The direction of movement of trains and 'on track' equipment over the line.
Blocking	The process of immobilising equipment or provision of protection against the movement of trains or 'on track' equipment.
Blocking - Point	An interlocking system function that, when activated, prevents point movement.

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Term	Main
Blocking - Signal	An interlocking system function that, when activated, prevents a controlled signal from displaying a permissive aspect.
Blocking - Track	An interlocking system function that, when activated, prevents the setting of routes into or across a TVP section.
Buffer stop	A fixed obstruction at the end of a track or line to limit the movement of railway vehicles.
2.3 C	
Cabinet	A housing to support signalling and communications equipment and protecting it from EMC and environmental damage.
Cancellation	Revocation or annulment
Clearance Point	The minimum distance from a point or a track crossing at which the track vacancy proving system boundaries must be positioned, to prove that a vehicle on one track is in a position clear of a movement on the other track.
Closed (1)	A logical state for a TVP section within an interlocking system
Closed (2)	A physical state for a level crossing once its activation sequence has been completed.
Closed (4)	A railway system in which the vehicles are captive to that system and which has no access to other railway lines
Collision	Unplanned contact between railway vehicles
Collision - Flank	Unplanned contact between railway vehicles at a fouling point
Collision - Head On	Unplanned contact between two railway vehicles travelling in opposite directions (head to head)
Collision - Rear end	Unplanned contact between a railway vehicle and the rear end of a vehicle ahead.
Command	An input from a traffic control system to an interlocking system requesting a defined function.
Commissioning	A collective term for the activities undertaken to prepare a system or product prior to demonstrating that it meets its specified requirements.
Communication Protocol	A set of rules and conventions governing a transferred message. The defined elements are syntax (data format, signal levels), semantics (information for coordination and error handling) and timing (speed matching and sequencing). A communication protocol consists of two parts: a data protocol and a transmission protocol.
Configuration	The structuring and interconnecting of hardware and software of a system for its intended application
Confirmation	An action providing additional veracity to a request.
Correspondance Checking	A check which ascertains that an apparatus is in the position corresponding to its operating control.
Criticality	The point at which a failure or number of failures renders the system unusable and/or unsafe
Cross Acceptance	Acceptance of a product by a railway without further assessment on the basis of its conformity with norms and previous acceptance by another railway.
Crossing Signal - Road	A signal or signals displayed to the drivers of approaching road traffic as to the state of a level crossing
Crossing Signal - Station	A signal system to warn station-crossing users of the approach of a train.
2.4 D	

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Term	Main
Damage	Injury or harm impairing the function or condition of a person or thing
Dark	State of a signal without a signal light either because of a failure or because of operating requirements.
Dark Territory	A line or section of track attached to a main line but that has no train detection system applied, and for which entry routes and signals may require special rules and controls.
Data Preparation System	A standardised and automated way of generating data for the configuration of a specific application of an interlocking system.
Data Protocol	A set of formats and rules governing the exchange of information between peer processes at the same communication layer.
De-activation function	That function supervising the opening of a level crossing to road traffic following a train movement.
Decomposition	A process within the control module that breaks a command into a number of more elementary commands.
Degraded Mode	The state of an interlocking system or sub-system in which it deviates from its specified performance because of failure. A mode of operation in which reduced availability of functionality or performance, while the same level of safety is maintained.
Derailer	Also 'Degraded Operation' A safety device attached to a rail, that will, when operated, cause a derailment of a train making an unauthorised movement.
Derailment	The situation arising when a railway vehicle leaves the tracks
Destination Track	A single TVP section or a continuous group of TVP sections containing at least the TVP section in rear of the route exit signal
Detected left	The physical value (detected value) of a point in the left position
Detected right	The physical value (detected value) of a point in the right position
Detected value	Information about the physical world that an interlocking system receives from a detection system.
Detection system	A system that interprets the state of a physical element and translates that state into a detected value
Detector	Apparatus fitted to a point to determine the position of the moveable parts.
Diagnostic Event	A generic expression for events in the interlocking system that the diagnostic system registers.
Diagnostic - System	A system that supports maintenance personnel in fault analysis and rectification after identification.
Diamond Crossing	An intersection between railway lines, consisting of two branches at varying angles, but does not permit travel between them
Diamond Crossing - Movable Switch	A type of diamond crossing used at shallow intersecting angles to alleviate the risk of derailment.
Displaying	An action describing a driving value from the interlocking system to a signal with the intention to display a signal aspect on the signal (does not describe the signal's ability to display an aspect, i.e. the signal can be dark)
Diversion arm	An additional signal associated with a stop signal and capable of displaying route information.

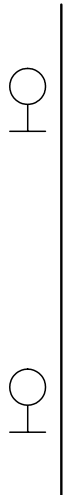
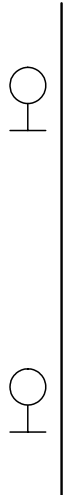
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Term	Main
	See also 'Junction Direction Indicator'
Driving On Sight	The speed at which a driver must drive to stop short of an obstacle on the track
	2.5 E
Emergency Command	A safety related command intended to bring the interlocking system into a safe state
Environment	Everything around a railway system with the exception of human beings
Error	A deviation from the intended design that could result in unintended system behaviour or failure.
Execution Priority	Information associated with a command or request that indicates whether it should be executed before or after another pending command or request. Several priority levels may be defined. The execution of a command or request can be interrupted only by a command or request with a higher execution priority and only if the interruption does not endanger railway safety.
External Operation Panel	A control panel provided for alternative or emergency operation of points and signals
	2.6 F
Facing - Direction	<u>For a point</u> - the direction in which a train approaches the switch blade tips first. <u>For a signal</u> - The driving direction in which the train driver can see the signal aspect.
Fail-safe	A design philosophy that results in any failure, expected or otherwise, maintaining or placing the equipment in a safe state.
Failure	A deviation from the specified performance of a system. A failure is the consequence of a fault or error in the system.
Failure - critical	A safety failure in a level crossing system.
Failure - Major	A failure in the interlocking system that affects a low number of physical elements or routes.
Failure - Minor (1)	A failure that does not prevent a system from achieving its specified performance, and that does not qualify as a 'major' or 'minor' failure.
Failure non-critical	A failure in a level crossing system that does not inherently affect safety
Failure - Significant	A significant failure is a failure that affects a large number of physical elements.
Fault	An abnormal condition that could lead to an error in a system. (A fault may be random or systematic). <i>(The state of an item characterised by inability to perform a required function, excluding preventative maintenance or other planned actions)</i>
Faulty	An adjective describing the state of an object under fault
Filament	The conducting wire in a bulb or lamp
Filament - Main	The first used filament in a signalling lamp
Filament - auxiliary	The 'standby' or auxiliary filament in a signalling lamp
Flank zone	A logical construction within an interlocking system representing the TVP sections lying between a track element providing

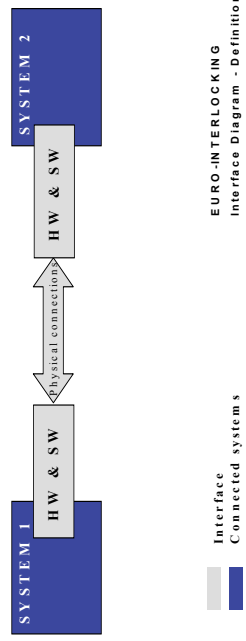
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Term	Main
	flank protection and the route body or overlap.
Flank protecting position	A position for points, in which they provide flank protection.
Flank protection	The positioning or interlocking of additional points and signals to provide protection against overrunning and converging train movements.
Flank Protection - Dynamic	A method of provision of flank protection that may automatically be re-assigned to other elements as the real time traffic situation changes.
Fouling TVP section	A TVP section not in the direct line of a route and with one of its extremities within the required fouling point
Fouling Point	Place beyond which traffic on converging routes could collide.
Fouling Point Indicator	Ground mounted indicator to show the limit of occupation of converging tracks.
Frame - Ground Lever	A lever or lever frame provided for the local operation of points and signals not controlled by an interlocking.
Freight	Non-human cargo being transported
	2.7 G
	2.8 H
Half Barriers	Level crossing equipment where only the facing half of the road is closed by the barriers when lowered.
Hand Operation	The mode of operation of equipment without the use of or assistance from electrical or other powered apparatus
Hazard	A physical situation with a potential for human injury
Hazard Analysis	The process of identifying the hazards that a product or its use can cause.
Hazard List	A catalogue of hazards resulting from the train movements process
Hazard Log	The document in which all safety management activities, hazards identified, decisions made and solutions adopted, are recorded or referenced.
	See also 'Safety Log'
Hazardous State	The condition of a physical situation with a potential to cause harm
Headway	That time (t) in seconds between the same point on two consecutive trains passing the same exact location.
Human Error	A human action (mistake), which can result in unintended system behaviour / failure.
	2.9 I
IL-K Input Value	An input to a track element from the interlocking kernel

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Term	Main
IL-K Output Value	An input to the interlocking kernel from a track element.
In Advance	<p>In relation to elements on or alongside the track, positioned such that a train reaches it after passing another defined item of equipment in the direction of travel.</p> <p>reference element element in advance</p> <p style="text-align: center;">  </p>
In Rear	<p>See also 'In Rear'</p> <p>In relation to elements on or alongside the track, positioned such that a train reaches it before passing another defined item of equipment in the direction of travel.</p> <p>element in rear reference element</p> <p style="text-align: center;">  </p>
Indication	See also 'In Advance'
Indicator - Limit of Shunt	A light or other device providing information as to system status.
Interface	A sign that indicates the extreme limit for shunting movements.
Interface - Communication	A connection between two systems or sub-systems defined by the specification of suitable characteristics relating to format, function, signal and interconnection at the boundaries.
	An interface of a protocol object that can be bound to an interface of either an interceptor object or another protocol object at an interworking reference location.

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Term	Main
	 <p style="text-align: center;">EURO-INTERLOCKING Interface Diagram - Definition</p>
Interface - Human / Machine (1)	<p>A device that permits human interaction with a Machine.</p> <p>See also 'HMI'</p> <p>See also 'MMI'</p>
Interface - Physical External	<p>Interfaces which are not communication interfaces.</p>
Interlocking	<p>Interdependent liaison between the control levers or electrical control circuits of the signalling apparatus, points, signals etc. which makes it impossible to place them in positions or states that conflict from the point of view of safety.</p>
Interlocking - Kernel	<p>A safety system that manages the signalling logic for the control of rail traffic in a specified area.</p> <p>See also 'Control Module'</p> <p>See also 'Interlocking System'</p>
Interlocking - System	<p>A system that, in accordance with commands from a signaller or signalling control system, manages track side equipment and the safe movement of rail traffic.</p> <p>The interlocking system consists of an interlocking kernel and the control module.</p>
	<p style="text-align: center;">2.10 J</p>
Junction	<p>An intersection between railway lines that permits traffic deviation between routes.</p>
Junction Indicator	<p>A supplementary indicator to a main signal to indicate the direction to which a route is set.</p>
Juridical Recorder	<p>A device that records all transactions within an interlocking system or on a train and with its subsystems as the basis for future off-line analysis of events.</p>

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Term	Main
	<i>(Trainborne systems are intended to be sufficiently robust to permit an accident to be analysed)</i>
	2.11 K
Key Box	The trackside containment for the release keys of 'key locks', and their associated monitoring equipment
Key Lock	A device in which a key is locked and can only be released when authorised e.g. by a signalman.
	2.12 L
Left position	The position for a set of points allowing travel to or from the left branch (as seen when facing the switch points) of the turnout.
	See also 'Detected - Left'
Level crossing	An intersection at grade between roads and railway tracks that may or may not be protected by lights, barriers or other equipment.
Level Crossing - Automatic	A level crossing where the road warning devices, and the barriers if provided, are activated by a train.
Level Crossing - System	The driving and detection system of the protection devices of a level crossing
Level Crossing - System External	A self-contained level crossing system that has an interface to the interlocking system.
Level Crossing - System Internal	A level crossing system whose functionality is integral to the interlocking system.
Level Crossing - Unprotected	A level crossing with no protection devices or interlocking with signalling equipment.
Line	The continuous section of railway track that forms the link between station or interlocking areas.
Line Block	A section of the railway between two stations controlled by a line block system.
Line - Double Track	A section of the line consisting of two tracks (not necessarily parallel)
Line - Single Local	A line consisting of one track
Local - Control Mode	As opposed to 'Remote' A design principle whereby Signalling equipment in the field may be released from central operation, and controlled locally
Local - Point Operation	A control mode that enables a point or group of points to be operated locally from a remote operating panel or ground frame while protected by the supervising interlocking.
Local Shunting Area	A section of the Interlocking supervision area that may be released to a shunter for protected but unsignalled train movements.

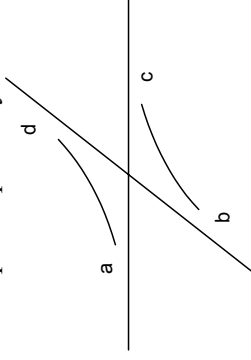
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Term	Main
	See also "LSA"
Lockable Device	Equipment applied to railway apparatus to prevent untoward movement, e.g. Bridge Bolt, Ground Lever Frame Release
Locked (1)	A logical condition that must exist for a track element within an interlocking system before a proceed movement authority can be issued over it
Locking	Supervision in an interlocking system that prevents the movement or use of elements in a route or local shunting area.
Logical state	An internal state of an interlocking system determined by changes to commands and statuses or detected values, or generated internally by changes to other logical states.
	2.13 M
Main route	A main route describes a signalled route protected by a main signal as opposed to a shunting signal.
Maintainability	The probability that a given maintenance action for an item under given conditions of use can be carried out within a specified timeframe (<i>stated time interval when the maintenance is performed</i>) if performed under the stated conditions and using recommended (<i>stated</i>) procedures and resources.
Maintainer	The person responsible for the maintenance of the interlocking system, with access to influence the operation of the signalling system in accordance with the requirements of the railway operating rules and regulations.
Maintenance	The combination of all technical and administrative actions, including supervisory actions, intended to retain a product in, or restore it to, a state in which it can perform a required function.
Maintenance - System	A composite of all maintenance resources that must be acquired for maintaining the system throughout its life cycle, including: Spare parts data/documentation/storage; Maintenance procedures; Maintenance manuals; Maintenance facilities (power supplies, offices, building of testing centres); External testing equipment; Special tools; Training of maintenance personnel.
Memory	A facility by which information previously saved can be retrieved
Model lifetime	The number of years for which the corresponding generic product and generic application shall be available from the supplier.
Monitoring	An interlocking system process ensuring that the conditions in a route for the display of a proceed movement authority are continuously met.
Moveable	A logical state for an element of the signalling system within an interlocking system permitting its movement by command or release.
Moveable element	A moveable track element, point or derailer, which can be power operated or hand operated.
Movement	Permission for a train to run to a specific location within the constraints of the infrastructure.

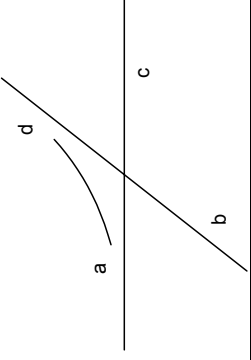
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Term	Main
Authority	
	2.14 N
Not Occupied	As opposed to occupied. A detected value from a TVP section indicating the lack of presence of rail vehicles.
	2.15 O
Object	Every physical subject having a connection with the railway (internal or external)
Obstacle Detector	A track element equipped with a detection system to warn of possible obstructions on the track. See Also 'Slide Fence' See Also 'Embankment Slip Detector'
Occupancy sequence	A sequence of occupying TVP sections reflecting the path of a rail vehicle
Occupational Staff	Any person working for a railway system
Occupied	A detected value from a TVP section indicating the presence of a rail vehicle.
Operational lifetime	The operational lifetime is the lifetime of a specific application at a site. The specific application's operational lifetime is the number of years after commissioning for which replacement parts and service shall be available from the supplier.
Opposing Locking Omitted	Interlocking between signals giving access at opposite ends and in opposite directions to the same section of track is omitted to allow both opposing signals to clear over the same section of track (TVP Section).
Overlap	A defined section of track in advance of a stop signal, or a stopping point in a continuous signalling system, which must be kept clear to avoid the risk of collision should a train inadvertently run past the signal or the stopping point.
Overlap - Swinging	An overlap section that may, even though locked, be swung away from a conflicting route to provide a full-length overlap
Override	To countermand, intervene or make ineffective. To interrupt an automatic function.
	2.16 P
Panel - Local Point Operating	A facility for enabling the local operation of a point or point groups.
Parallel mode	A mode in which an interlocking system can be controlled from a local and central system (TCS) simultaneously.
Passenger	A person who is being, or wishes to be, transported
Performance	A measure of the ability of a system to meet specified requirements
Permissive Working	A method of train working that permits trains to be signalled onto occupied tracks
Permitted Speed	The maximum speed at which a train may traverse the line without infringing upon the speed restrictions in force at the time.
Person	Any human with an association to the railway internally or externally.

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Term	Main
Physical Element	Objects in the 'real world' environment that are driven by a 'Driving System' or whose values are detected by a 'Detection System'.
Physical Interlocking Unit	A collective term for the interlocking system, including subsystems and other systems that are supplied with the interlocking system.
Physical state	The actual position or condition of the equipment.
Platform	A purpose built structure alongside the Line for the loading or unloading of passengers or freight
Platform - Terminal	A platform from which trains may only depart in one direction.
Point (s)	Assembly of rails, blades and of auxiliaries, certain ones being movable, which effect the tangential branching of tracks and allows to run over either one track or another.
Point - Automatic Operation	An interlocking state whereby a point is moved using a request for a route to be set.
Points - Coupled	Two (or more) sets of points that operate together e.g. Crossover configuration, switch diamonds (moveable angles), points with moveable frogs.
Point Detection	Proof that a point is either detected left or detected right
Point Detector	A device checking the position of a point blade
Point - Double Slip	A compound point layout combining the function of four points and a diamond crossing in the same layout.
	
Point - Emergency Released	A function of the interlocking system whereby a point is released to an alternative system for emergency local operation
Point - Facing	A point layout direction in which the train encounters the tips of the points first.
Point - Hand operated	A point operated by means of a lever as opposed to machines or signal rods.
Point - Key-locked	Manually operated points within an Interlocking or Line Block area, which are secured by a key-lock and locked / released by the associated interlocking in an agreed sequence.
Point - Left	The position of a point whereby a train travelling over the point in the facing direction will use the left branch or track.
	See also 'Detected Left'
Point Machine	An assembly, within a casing, of the apparatus for operating point blades from a source of power, usually electric.
Point - Manual	A method of operation whereby a point can be moved individually by request from a signaller or local shunter.

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Term	Main
Operation	
Point - Powered	A point (or points) operated by a machine
Point - Right	The position of a point whereby a train travelling over the point in the facing direction will use the Right branch or track.
Point - Selective Protection	See also 'Detected Right' Flank protection point for two routes which according to the position of the points can protect only one route.
Point - Self-restoring	Where a point has a predefined default position, it may automatically be restored to that position after the passage of a train, or upon cancellation of a route over it.
Point - Single Slip	A compound point layout combining the function of two points and a diamond crossing in the same layout. 
Point - Strike-in	The position on the approach to an automatic level crossing or other installation at which a train initiates the operating sequence.
Point - Trailable	A point, generally power operated, and locked for facing movements but that can be 'run through' in the trailing direction without damage to the machine lock or the point switches.
Point - Trailed	The condition assigned to a point when it has been 'run through' in the trailing direction and with the switches set incorrectly for the movement.
Point - Trailing	A point for which the direction of travel is for converging traffic.
Position of Vehicles	Information related to the position of a railway vehicle on the railway infrastructure
Power Supply	A device for the provision of electrical power to the railway, particularly the signalling and vehicles.
Preliminary Hazard Analysis	Forecasting of the probability that damage will occur in a system on the basis of the system's characteristic data and life cycle.
Pre-conditions	Those conditions leading to a hazardous state
Proceed	A signal (or other) aspect displayed to a driver or automated system that enables train movement.
Protection	Equipment and/or devices or rules for operation of the railway in a safe manner.
Proven train passage	A condition where a train has been detected as having entered and left a particular track section by correct sequencing in the direction of the route setting.

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Term	Main
	2.17 R
Railway	A mode of transportation provided in vehicles running on tracks i.e. rails or guideways.
Railway Infrastructure	A part of the railway with track elements, level crossings etc.
Railway Operation	The supervision and control of the entire railway system
Railway System	The whole system inside the boundaries of the railway including environment, objects and persons
Railway Vehicle	Any vehicle that can move along a railway
RAMS Programme	A documented set of time scheduled activities, resources and events serving to implement the organisational structure, responsibilities, procedures activities capabilities and resources that together ensure that an item will satisfy given RAM requirements relevant to a given contract or project.
Release (1)	The process of handing control from a centralised operator to a local operator
Release (2)	The process of unlocking e.g. Routes
Release - Time	The application of a specific delay to the unlocking of signalling functions in specified conditions.
Release - Turn-back	The release of a route behind a train once it has reversed direction.
Releasing	The process of removing a reserved path or locked route after the passage of a train or by signaller's cancellation request.
Remote	As Opposed to 'Local'
Replacement	The act of changing a signal from Proceed to Stop thus terminating signal monitoring until specified conditions have been fulfilled.
Request	An input to the interlocking system to initiate an action.
Right - Position	The position for a set of points allowing travel to or from the right branch (as seen when facing the switch points) of the turnout.
Risk	See also 'Detected - Right'
Road Vehicle	The combination of the frequency, probability and consequence of a specified hazardous event.
Route	Any vehicle, powered or otherwise travelling on roads
Route - Alternative	A predetermined path for a traffic movement.
Route - Body	Additional and alternative paths between an entry and an exit signal that may be used if the default path is not available.
Route - Cancellation	That part of the set route between the entrance and exit signal and not including the flank or overlap sections.
Route Type	Action of freeing one or more line sections assigned to a given route by itinerary control in order to establish new routes (path establishment).
	The action of freeing one or more line sections assigned to a given route
	A category of route that determines the type of signal controls to be provided (e.g. Main, Shunting or Drive on Sight)

GLOSSARY

Term	Main
Route - Composite	A route between selected entry and exit signals that contains various sub-routes each with a controlling signal and that must be set as a part of the original route request.
Route - Conflicting	A route that crosses, opposes or converges with another route, or would require the use of a route element while that element is already used in a non-compatible or conflicting position
Route - Drive on Sight	That main route sub type assigned by the interlocking when a route is requested wherein the monitoring conditions for a full aspect are not fulfilled.
Route - Default	The primary designated locked path between an entry and exit signal.
Route Indicator	A supplementary indicator to a main signal to indicate the direction to which a route is set.
Route - Indicator Alphanumeric	An Indicator attached to a Signal that is capable of displaying Route speed information to the train driver by the use of illuminated numbers or letters.
Route Initiation	Part of a route lifecycle - Interlocking route setting phase 1.
	See also 'Availability check'
Route Life Cycle	The existence of a route through an interlocking area from initiation to release.
Route - Opposing	A route that would require the use of a route element while that element is already used in another route in the opposing direction.
Route Rejection	A situation where the interlocking system will not act upon a request from the signaller if the selected route elements are not available and if there is no alternate.
Route Release	The setting of track elements in a route to 'not locked' or the releasing of route locking.
Route - Residual	Any portion of route locking remaining after the passage of a train has failed to satisfy the releasing sequences.
Route Setting	The interlocking system process of allocating, positioning and locking moveable track elements into a route.
Route - Shunting	A route for shunting movements which, because of the low speed used and running on sight, allows reduced signalling requirements, such as the use of shunting signals and omission of flank protection and overlaps.
Route - Warning Class	A route sub type given where the full overlap is not available at the time of setting, and for which special aspect controls may be required.
	2.18 S
Safe State	A condition that continues to maintain safety
Safety	<i>State in which no accident or system disruption is envisaged. (RailLexic)</i>
Safety Override Command	Freedom from unacceptable risk of harm or damage. A command that overrides the normal safety functionality of an interlocking system.

GLOSSARY

Term	Main
Safety plan	A documented set of time-scheduled activities, resources and events serving to implement the organisational structure, responsibilities, procedures, activities, capabilities and resources that together ensure that an item satisfies given safety requirements relevant to given a contract or project.
Safety related	Bearing responsibility for safety
Safety requirements	A list of stipulations referring exclusively to safety issues
Secured level crossing	A level crossing that is operating correctly at the approach of a train.
Secured warning system	An interlocking sub-system by which elements of the Signalled route that provide track worker or passenger protection are proven to be functioning before a Signal is permitted to clear to 'Proceed'
Session	The process of establishing a communications link, transferring a message and closing the link
Shunter	The person responsible for the use of trackside equipment in connection with the interlocking system for the purpose of assisting shunting movements.
Siding	A track used for the stabling of vehicles or where loading and unloading is performed clear of the Running Lines.
Sighting Distance	The optimal distance from a signal at which the aspect must become discernable, based upon line speed, curvature, obstructions etc.
Sighting Point	The furthest point from a signal at which the driver can reliably observe the signal aspect and that of associated indicators. (nominally set by line speed and the nature of obstructions on the approach to a signal)
Signal	Apparatus by means of which a conventional visual or acoustic indication is given, generally concerning the movements of railway vehicles.
Signal - Absolute Stop	A signal that may not be passed when displaying the Stop aspect.
Signal - Call On	A subsidiary signal that permits the passing of a main signal displaying 'stop', and in order to perform low-speed movements.
Signal - Combination	A combination, on the same signal or post, of a main signal and a shunting signal, used where shunting movements take place.
Signal - Common	A signal which applies to any one of a group of converging tracks.
Signal - Defective	A signal with a fault that affects its designed operation.
Signal - Departure	A signal authorizing the departure of a movement from a station or a yard.
Signal - Distant	A Main Signal that indicates the condition of the main signal ahead, but that cannot by itself display a 'stop' aspect
Signal - Dwarf	A ground mounted signal that may protect shunting or main routes.
Signal - Entry	A main signal, intended for trains entering a station or yard.
Signal - Exit	A signal which protects the exit route of a station or a yard.
Signal - Facing	A direction of traffic in which the driver of an approaching train can see the signal aspect.
Signal - Fictive	A signal transmitted to the driver by the ATP system independent from the trackside signals
Signal - H	A signal mainly applying to freight trains operating over gradients.
Signal headway	The distance between signals providing a service headway for traffic.

GLOSSARY

Term	Main
Signal - Intermediate	A sub-route signal between the beginning and the end of a route. An intermediate signal is neither an entry signal nor exit signal.
Signal - L	A signal applying to freight trains operating over gradients.
Signal - Lamp Proving	Detection that the filament of a signal lamp is intact.
Signal light intensity	The 'brightness' with which a signal lamp displays its aspect e.g. Daytime or Nighttime illumination.
Signal - Main	A Signal capable of displaying 'Main' aspects and which, when cleared, permits a train to start, continue or resume its movement.
Signal - Permissive	A signal aspect or identification plate that enables a train to pass a main signal at 'stop' under certain conditions and without permission from the signaller.
Signal - Platform	A main signal that can also operate as a shunting signal.
Signal - Platform Repeating	A signal provided in a platform to indicate the condition of the start signal (usually just 'Stop' or 'Start' with no aspect information).
Signal Positioning	Location of signals which satisfies the requirements of: visibility, distance from the location protected, position relative to the track and to other signals, structure gauge, etc.
Signal - Protecting	A stop signal in a level crossing activation zone and protecting the crossing
Signal - Repeating	A signal placed between a distant signal and its corresponding stop signal to repeat the latter should it be difficult to see.
Signal - Route Entry	A signal situated at the beginning of a route.
Signal - Route Exit	A signal situated at the end of a route.
Signal - Shunting	A signal provided for shunting movements only.
Signal - Staff Crossing Protection	Signals placed at either end of a staff crossing to warn of approaching traffic.
	See also 'Signal Passenger Crossing Protection' or 'Barrow Crossing')
Signal - sub-route	A signal controlling the entrance to a sub-route in composite routes. This can be a shunt, platform or main signal.
Signal - Subsidiary	Signal on the post of a main signal which permits a train to proceed at reduced speed with clear visibility over the route ahead of the signal when the main signal cannot be cleared.
Signal - Turnback	A signal in a main or shunting route that, can be used as the entry signal for a route permitting reversal of the train.
Signaller	The person responsible for the operation of the signalling system in accordance with the requirements of the railway operating rules and regulations.
Signalling	The provision of signals and other related equipment to control the movement of railway vehicles
Signalling System	A system to ensure the safe movement of trains by means of lineside indications and/or indications given in the driver's cab.
Speed signalling	A signalling system that indicates the speed which is not to be exceeded by a train, by means of lineside signals or indications in the cab.
Station (I)	A location provided for the embarkation and dis-embarkation of passengers and goods from railway vehicles.

GLOSSARY

Term	Main
Station (2)	The defined, signalled area between opposing station entry signals or between interlocking limits
Station Limit	The border between the station area and the line marked by station entry signals.
Status	An output from the interlocking system to a TCCS or other supervisory system to inform the signaller as to the condition of the railway
Steering System	A system that interprets a driving value from the interlocking system and drives a physical element.
Storing	A function that allows a request that cannot be fulfilled immediately, to be stored within the interlocking system, until such time that the request can be fulfilled.
Subsystem	A combination of equipment, units and assemblies etc. that performs an operational function and that is a major subdivision of the system
Swing bridge	A bridge mounted on a central pier permitting horizontal rotation of the bridge deck.
System Failure Mode	A trainborne equipment mode entered when a fatal failure that could affect safety is encountered.
System Information	The configuration of all data concerning the railway, particularly device or train position data
System intervention	An action taken by the railway system to prevent a hazardous situation
System lifecycle	The activities occurring during a period of time that starts when a system is conceived and ends at de-commissioning when the system is no longer available for use.
System lifetime	The number of years for which the interlocking system shall be available for purchase and application
Synthesis	A process that takes place in the control module and combines a number of elementary statuses into a more general status.
	2.19 T
Tester	One or more persons assigned by the design authority to specify and perform the tests necessary to ensure that the realisation of a design is correct and meets all the specified test and acceptance criteria.
Track	The collection of structures upon which rail vehicles travel e.g. rails, sleepers, chairs and rails etc.
Track Circuit (TVP)	An electrical circuit of which the rails of a track section form a part and which is used to positively detect the absence of trains over that section of the Station or Line.
	See also 'TVP'
Track Circuit - Audio Frequency	A train detection circuit using the rails and an alternating current of audible frequency.
Track Element	A part of the railway track that can be fixed or moveable
Track Segment	A portion of track which the interlocking system can recognise by means of a track vacancy proving system.
	See also 'Track Circuit'
	See also 'Axle Counter Section'
Track Vacancy	A detection system that detects the absence of a train on a track segment.

GLOSSARY

Term	Main
Proving System	
Track Vacancy Proving	The function of proving a defined section of track not occupied.
Traffic Control System	A system offering a human-machine interface that allows a signaller to control one or more interlocking systems.
Train	See Also 'TCS'
Train Operated Route Release	A traction unit with or without coupled railway vehicles. The release of a route by train movement over the route. See also 'TORR'
Transmission	A message or data string sent over a communication medium.
Transmission Priority	Information associated with an item of data (such as a command) that indicates whether it should be sent before or after another item that is also awaiting transmission. Several priority levels can be defined. An item can be overtaken in an output queue only by a item with a higher transmission priority and only if the interruption does not endanger railway safety.
Transmission Protocol	A set of rules and conventions (a data protocol) for the transmission of data between end systems.
Treadle	A track device for additional detection of a train, complementing a TVP section
TVP Boundary	The end of a particular track vacancy proving section as defined by the positions of insulated rail joints or other detecting apparatus on, by or between the rails
	2.20 U
Used	The state of any route element in any stage of the route life cycle, as long as the element is used by its route.
	2.21 V
Validation	Demonstration by test and analysis that a product meets all the requirements, whether specified or not.
Verification	Determination by analysis and test at each phase of the development life-cycle the outputs of previous and current phases meet requirements
Vital	A communication medium or interface whose correct operation is essential to the integrity and safety of a system. (Also applied to railway equipment e.g. relays)
	2.22 W
Wagon	A railway vehicle without a motor or other tractive device
Warning - System	A physical element with associated detection and driving systems for protection of personnel working on or near the track.

GLOSSARY

Term	Main
Wheel Detector	Devices that can detect the presence of a rail vehicle wheel and act as a supplementary detector to a TVP section or overlay track circuit.
3 Abbreviations	
ALARP	As Low As Reasonably Practical
ARS	Automatic Route Setting
ATC	Automatic Train Control (System)
ATP	Automatic Train Protection (Subsystem)
AWS	Automatic Warning System
CRC	Cyclic Redundancy Check
DPS	Data Preparation System
EMC	Electro Magnetic Compatibility
EOP	Emergency Operating Panel
FFFIS	Form Fit Function Interface Specification
FIS	Functional Interface Specification
HMI	Human - Machine Interface
IL-K	Interlocking Kernel
IL-X	An adjacent interlocking system
LAN	Local Area Network
LB	Line Block
LPCP	Local Point Control Panel
LSA	Local Shunting Area (also LCSA)
LX	Level Crossing System
MDT	Mean Down Time
MTBF	Mean Time Between Failures
MTTR	Mean Time To Restoration
OSI	Open Systems Interconnection
RAMS	Reliability, Availability, Maintainability and Safety
RBC	ERTMS:- Radio Block Centre
SELRED	Structured English Language for REquirements Development
SIL	Safety Integrity Level
STS	A main route sub type used for setting routes over failed elements
TAWS	Train Activated Warning System
TBD	To Be Determined
TCS	Traffic Control System

GLOSSARY

Term	Main
TORR	Train Operated Route Release
T _{pcd}	Time - physical carry delay
T _t	Transmission time
TVP	Track Vacancy Proving (Section or System)
UPS	Uninterruptible Power Supply
USO	User Specific Object
WAN	Wide Area Network