Description of

output types of

Driver Card's / Vehicle Unit's

XML-Files created with

org.opendtacho.DDDQuery

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Contents

1 Description of the XML elements

1.1 ActivityChangeInfo

- Java data types used:
  - *value*: byte[]
  - *slot*: boolean
  - *drivingStatus*: boolean
  - *cardStatus*: boolean
  - *activity*: byte
  - *time*: int
- XML output types:
  - *value*: hexstring
  - *slot*: boolean
  - *drivingStatus*: boolean
  - *cardStatus*: boolean
  - *activity*: hexstring
  - *time*: int

1.2 Address

- Java data types used:
  - *codePage*: short
  - *address*: byte[]
- XML output types:
  - *codePage*: short
  - *address*: String, encoded as ISO 8859-<codePage>

1.3 CalibrationPurpose

- Java data type used:
  - *calibrationPurpose*: byte
- XML output type:
  - *calibrationPurpose*: hexstring

1.4 CardActivityDailyRecord

- Java data types used:
  - *activityPreviousRecordLength*: CardActivityLengthRange
  - *activityRecordLength*: CardActivityLengthRange
  - *activityRecordDate*: TimeReal
  - *activityDailyPresenceCounter*: DailyPresenceCounter
  - *activityDayDistance*: Distance
  - *activityChangeInfo*: Vector<ActivityChangeInfo>
- XML output types:
  - *activityPreviousRecordLength*: CardActivityLengthRange
  - *activityRecordLength*: CardActivityLengthRange
  - *activityRecordDate*: TimeReal
  - *activityDailyPresenceCounter*: DailyPresenceCounter
  - *activityDayDistance*: Distance
  - *activityChangeInfo*: Vector<ActivityChangeInfo>

1.5 CardActivityLengthRange

- Java data type used: int
- XML output type: int

1.6 CardApprovalNumber

- Java data type used: String
- XML output type: String

1.7 CardCertificate

- Java data type used: Certificate
- XML output type: Certificate

1.8 CardChipIdentification

- Java data types used:
  - *icSerialNumber*: byte[]
  - *icManufacturingReferences*: byte[]
- XML output type:
  - *icSerialNumber*: hexstring
  - *icManufacturingReferences*: hexstring

1.9 CardConsecutiveIndex

- Java data type used: String
- XML output type: String

1.10 CardControlActivityDataRecord

- Java data types used:
  - *controlType*: controlType
  - *controlTime*: controlTime
  - *controlCardNumber*: FullCardNumber
  - *controlVehicleRegistration*: VehicleRegistrationIdentification
  - *controlDownloadPeriodBegin*: TimeReal
  - *controlDownloadPeriodEnd*: TimeReal
- XML output types:
  - *controlType*: controlType
  - *controlTime*: controlTime
  - *controlCardNumber*: FullCardNumber
  - *controlVehicleRegistration*: VehicleRegistrationIdentification
  - *controlDownloadPeriodBegin*: TimeReal
  - *controlDownloadPeriodEnd*: TimeReal

1.11 CardCurrentUse

- Java data types used:
  - *sessionOpenTime*: TimeReal
  - *sessionOpenVehicle*: VehicleRegistrationIdentification
- XML output types:
  - *sessionOpenTime*: TimeReal
  - *sessionOpenVehicle*: VehicleRegistrationIdentification

1.12 CardDriverActivity

- Java data types used:
  - *activityPointerOldestDayRecord*: int
  - *activityPointerNewestRecord*: int
  - *activityDailyRecords*: Vector<CardActivityDailyRecord>

- XML output types:
  - o *activityDailyRecords*: Vector<CardActivityDailyRecord>

1.13 CardDrivingLicenceInformation

- Java data types used:
  - o *drivingLicenceIssuingAuthority*: Name
  - o drivingLicenceIssuingNation: NationNumeric
  - o *drivingLicenceNumber*: String
- XML output types:
  - o *drivingLicenceIssuingAuthority*: Name
  - o drivingLicenceIssuingNation: NationNumeric
  - o *drivingLicenceNumber*: String

1.14 CardEventData

- Java data types used:
  - o *cardEventRecords*: Vector<Vector<CardEventRecord>
- XML output types:
  - o *cardEventRecords*: Vector<Vector<CardEventRecord>

1.15 CardEventRecord

- Java data types used:
  - o *eventType*: EventFaultType
  - o *eventBeginTime*: TimeReal
  - o *eventEndTime*: TimeReal
  - o *eventVehicleRegistration*: VehicleRegistrationIdentification
- XML output types:
  - o *eventType*: EventFaultType
  - o *eventBeginTime*: TimeReal
  - o *eventEndTime*: TimeReal
  - o *eventVehicleRegistration*: VehicleRegistrationIdentification

1.16 CardFaultData

- Java data types used:
  - o *cardFaultRecords*: Vector<Vector<CardFaultRecord>
- XML output types:
  - o *cardFaultRecords*: Vector<Vector<CardFaultRecord>

1.17 CardFaultRecord

- Java data types used:
  - *faultType*: EventFaultType
  - *faultBeginTime*: TimeReal
  - *faultEndTime*: TimeReal
  - *faultVehicleRegistration*: VehicleRegistrationIdentification
- XML output types:
  - *faultType*: EventFaultType
  - *faultBeginTime*: TimeReal
  - *faultEndTime*: TimeReal
  - *faultVehicleRegistration*: VehicleRegistrationIdentification

1.18 CardIccIdentification

- Java data types used:
  - *clockStop*: byte
  - *cardExtendedSerialNumber*: ExtendedSerialNumber
  - *cardApprovalNumber*: cardApprovalNumber
  - *cardPersonaliserID*: byte
  - *embedderIcAssemblerId*: byte[]
  - *icIdentifier*: byte[]
- XML output types:
  - *clockStop*: hexstring
  - *cardExtendedSerialNumber*: ExtendedSerialNumber
  - *cardApprovalNumber*: cardApprovalNumber
  - *cardPersonaliserID*: hexstring
  - *embedderIcAssemblerId*: hexstring
  - *icIdentifier*: hexstring

1.19 CardIdentification

- Java data types used:
  - *cardIssuingMemberState*: NationNumeric
  - *cardNumber*: CardNumber
  - *cardIssuingAuthorityName*: Name
  - *cardIssueDate*: TimeReal
  - *cardValidityBegin*: TimeReal
  - *cardExpiryDate*: TimeReal
- XML output types:
  - *cardIssuingMemberState*: NationNumeric
  - *cardNumber*: CardNumber
  - *cardIssuingAuthorityName*: Name
  - *cardIssueDate*: TimeReal
  - *cardValidityBegin*: TimeReal
  - *cardExpiryDate*: TimeReal

1.20 CardNumber

- Java data types used for driver cards:
  - *driverIdentification*: String
  - *cardReplacementIndex*: CardReplacementIndex
  - *cardRenewalIndex*: CardRenewalIndex
- XML output types used for driver cards:
  - *driverIdentification*: String
  - *cardReplacementIndex*: CardReplacementIndex
  - *cardRenewalIndex*: CardRenewalIndex
- Java data types used for workshop, control and company cards:
  - *ownerIdentification*: String
  - *cardConsecutiveIndex*: CardConsecutiveIndex
  - *cardReplacementIndex*: CardReplacementIndex
  - *cardRenewalIndex*: CardRenewalIndex
- XML output types used for workshop, control and company cards:
  - *ownerIdentification*: String
  - *cardConsecutiveIndex*: CardConsecutiveIndex
  - *cardReplacementIndex*: CardReplacementIndex
  - *cardRenewalIndex*: CardRenewalIndex

1.21   CardPlaceDailyWorkPeriod

- Java data types used:
  - *placeRecords*: Vector<PlaceRecord>
- XML output types:
  - *placeRecords*: Vector<PlaceRecord>

1.22   CardPrivateKey

- Java data type used: RSAKeyPrivateExponent
- XML output type: RSAKeyPrivateExponent

1.23   CardPublicKey

- Java data type used: PublicKey
- XML output type: PublicKey

1.24   CardRenewalIndex

- Java data type used: String
- XML output type: String

1.25   CardReplacementIndex

- Java data type used: String
- XML output type: String

1.26   CardSlotNumber

- Java data type used: short
- XML output type: short

1.27   CardSlotStatus

- Java data type used: byte
- XML output type: hexstring

1.28   CardStructureVersion

- Java data type used: byte[]
- XML output type: hexstring

1.29   CardVehicleRecord

- Java data types used:
  - *vehicleOdometerBegin*: OdometerShort
  - *vehicleOdometerEnd*: OdometerShort
  - *vehicleFirstUse*: TimeReal
  - *vehicleLastUse*: TimeReal
  - *vehicleRegistration*: VehicleRegistrationIdentification
  - *vuDataBlockCounter*: VuDataBlockCounter
- XML output types:
  - *vehicleOdometerBegin*: OdometerShort
  - *vehicleOdometerEnd*: OdometerShort
  - *vehicleFirstUse*: TimeReal
  - *vehicleLastUse*: TimeReal
  - *vehicleRegistration*: VehicleRegistrationIdentification
  - *vuDataBlockCounter*: VuDataBlockCounter

1.30   CardVehiclesUsed

- Java data types used:
  - *cardVehicleRecords*: Vector <CardVehicleRecord>
- XML output types:
  - *cardVehicleRecords*: Vector <CardVehicleRecord>

1.31   Certificate

- Java data type used: byte[]
- XML out type: hexstring

1.32   CertificateContent

- Java data types used:
  - *certificateProfileIdentifier*: short
  - *certificationAuthorityReference*: KeyIdentifier
  - *certificateHolderAuthorisation*: CertificateHolderAuthorisation
  - *certificateEndOfValidity*: TimeReal
  - *certificateHolderReference*: KeyIdentifier
  - *publicKey*: PublicKey

- XML output types:
  - *certificateProfileIdentifier*: short
  - *certificationAuthorityReference*: KeyIdentifier
  - *certificateHolderAuthorisation*: CertificateHolderAuthorisation
  - *certificateEndOfValidity*: TimeReal
  - *certificateHolderReference*: KeyIdentifier
  - *publicKey*: PublicKey

1.33 CertificateHolderAuthorisation

- Java data types used:
  - *tachographApplicationID*: byte[]
  - *equipmentType*: EquipmentType
- XML output types:
  - *tachographApplicationID*: hexstring
  - *equipmentType*: EquipmentType

1.34 CertificateRequestID

- Java data types used:
  - *requestSerialNumber*: long
  - *requestMonthYear*: byte[]
  - *crIdentifier*: byte
  - *manufacturerCode*: ManufacturerCode
- XML output types:
  - *requestSerialNumber*: long
  - *requestMonthYear*: BCDString
  - *crIdentifier*: hexstring
  - *manufacturerCode*: ManufacturerCode

1.35 CertificationAuthorityKID

- Java data types used:
  - *nationNumeric*: NationNumeric
  - *nationAlpha*: NationAlpha
  - *keySerialNumber*: short
  - *additionalInfo*: byte[]
  - *caIdentifier*: byte

- XML output types:
  - *nationNumeric*: NationNumeric
  - *nationAlpha*: NationAlpha
  - *keySerialNumber*: short
  - *additionalInfo*: hexstring
  - *caIdentifier*: hexstring

1.36 CompanyActivityData

- Java data types used:
  - *companyActivityRecords*: Vector<CompanyActivityRecords>
- XML output types:
  - *companyActivityRecords*: Vector<CompanyActivityRecords>

1.37 CompanyActivityRecord

- Java data types used:
  - *companyActivityType*: CompanyActivityType
  - *companyActivityTime*: TimeReal
  - *cardNumberInformation*: FullCardNumber
  - *vehicleRegistrationInformation*: VehicleRegistrationIdentification
  - *downloadPeriodBegin*: TimeReal
  - *downloadPeriodEnd*: TimeReal
- XML output types:
  - *companyActivityType*: CompanyActivityType
  - *companyActivityTime*: TimeReal
  - *cardNumberInformation*: FullCardNumber
  - *vehicleRegistrationInformation*: VehicleRegistrationIdentification
  - *downloadPeriodBegin*: TimeReal
  - *downloadPeriodEnd*: TimeReal

1.38 CompanyActivityType

- Java data types used: short
- XML output types: short

1.39 CompanyCardApplicationIdentification

- Java data types used:
  - *typeOfTachographCardId*: EquipmentType
  - *cardStructureVersion*: CardStructureVersion
  - *noOfCompanyActivityRecords*: NoOfCompanyActivityRecords
- XML output types:
  - *typeOfTachographCardId*: EquipmentType
  - *cardStructureVersion*: CardStructureVersion
  - *noOfCompanyActivityRecords*: NoOfCompanyActivityRecords

1.40 CompanyCardHolderIdentification

- Java data types used:
  - *companyName*: Name
  - *companyAddress*: Address
  - *cardHolderPreferredLanguage*: Language
- XML output types:
  - *companyName*: Name
  - *companyAddress*: Address
  - *cardHolderPreferredLanguage*: Language

1.41 ControlCardApplicationIdentification

- Java data types used:
  - *typeOfTachographCardId*: EquipmentType
  - *cardStructureVersion*: CardStructureVersion
  - *noOfControlActivityRecords*: NoOfControlActivityRecords
- XML output types:
  - *typeOfTachographCardId*: EquipmentType
  - *cardStructureVersion*: CardStructureVersion
  - *noOfControlActivityRecords*: NoOfControlActivityRecords

1.42 ControlCardControlActivityData

- Java data types used:
  - *controlActivityRecords*: Vector<ControlActivityRecord>
- XML output types:
  - *controlActivityRecords*: Vector<ControlActivityRecord>

1.43 ControlCardHolderIdentification

- Java data types used:
  - *controlBodyName*: Name
  - *controlBodyAddress*: Address
  - *cardHolderName*: HolderName
  - *cardHolderPreferredLanguage*: Language
- XML output types:
  - *controlBodyName*: Name
  - *controlBodyAddress*: Address
  - *cardHolderName*: HolderName
  - *cardHolderPreferredLanguage*: Language

1.44 ControlType

- Java data types used:
  - *value*: byte
  - *card_downloading*: boolean
  - *vu_downloading*: boolean
  - *display*: boolean
  - *printing*: boolean
- XML output types:
  - *value*: hexstring
  - *card_downloading*: boolean
  - *vu_downloading*: boolean
  - *display*: boolean
  - *printing*: boolean

1.45 CurrentDateTime

- Java data type used: TimeReal
- XML output type: TimeReal

1.46 DailyPresenceCounter

- Java data type used: byte[]
- XML output type: BCDString

1.47   Datef

- Java data types used:
  - *year*: byte[]
  - *month*: byte
  - *day*: byte
- XML output types:
  - *year*: BCDString
  - *month*: BCDString
  - *day*: BCDString

1.48   Distance

- Java data type used: int
- XML output type: int

1.49   DriverCardApplicationIdentification

- Java data types used:
  - *typeOfTachographCardId*: EquipmentType
  - *cardStructureVersion*: CardStructureVersion
  - *noOfEventsPerType*: NoOfEventsPerType
  - *noOfFaultsPerType*: NoOfFaultsPerType
  - *activityStructureLength*: CardActivityLengthRange
  - *noOfCardVehicleRecords*: NoOfCardVehicleRecords
  - *noOfCardPlaceRecords*: NoOfCardPlaceRecords
- XML output types:
  - *typeOfTachographCardId*: EquipmentType
  - *cardStructureVersion*: CardStructureVersion
  - *noOfEventsPerType*: NoOfEventsPerType
  - *noOfFaultsPerType*: NoOfFaultsPerType
  - *activityStructureLength*: CardActivityLengthRange
  - *noOfCardVehicleRecords*: NoOfCardVehicleRecords
  - *noOfCardPlaceRecords*: NoOfCardPlaceRecords

1.50   DriverCardHolderIdentification

- Java data types used:
    - *cardHolderName*: HolderName
    - *cardHolderBirthDate*: Datef
    - *cardHolderPreferredLanguage*: Language
- XML output types:
    - *cardHolderName*: HolderName
    - *cardHolderBirthDate*: Datef
    - *cardHolderPreferredLanguage*: Language

1.51   EntryTypeDailyWorkPeriod

- Java data type used: short
- XML output type: short

1.52   EquipmentType

- Java data type used: short
- XML output type: short

1.53   EuropeanPublicKey

- Java data type used: PublicKey
- XML output type: PublicKey

1.54   EventFaultRecordPurpose

- Java data type used: byte
- XML output type: hexstring

1.55   EventFaultType

- Java data type used: byte
- XML output type: hexstring

1.56   ExtendedSerialNumber

- Java data types used:
    - *serialNumber*: long
    - *monthYear*: byte[]
    - *type*: byte
    - *manufacturerCode*: short

- XML output type:
  - *serialNumber*: long
  - *monthYear*: BCDString
  - *type*: hexstring
  - *manufacturerCode*: short

1.57　FullCardNumber

- Java data types used:
  - *cardType*: EquipmentType
  - *cardIssuingMemberState*: NationNumeric
  - *cardNumber*: CardNumber
- XML output type:
  - *cardType*: EquipmentType
  - *cardIssuingMemberState*: NationNumeric
  - *cardNumber*: CardNumber

1.58　HolderName

- Java data types used:
  - *holderSurname*: Name
  - *holderFirstName*: Name
- XML output types:
  - *holderSurname*: Name
  - *holderFirstName*: Name

1.59　K_ConstantOfRecordingEquipment

- Java data type used: int
- XML output type: int

1.60　KeyIdentifier

- Java data types used:
  - *extendedSerialNumber*: ExtendedSerialNumber
  - *certificateRequestID*: CertificateRequestID
  - *certificationAuthorityKID*: CertificationAuthorityKID

- XML output types:
  - *extendedSerialNumber*: ExtendedSerialNumber
  - *certificateRequestID*: CertificateRequestID
  - *certificationAuthorityKID*: CertificationAuthorityKID

1.61 L_TyreCircumference

- Java data type used: int
- XML output type: int

1.62 Language

- Java data type used: String
- XML output type: String

1.63 LastCardDownload

- Java data type used: TimeReal
- XML output type: TimeReal

1.64 ManualInputFlag

- Java data type used: boolean
- XML output type: boolean

1.65 ManufacturerCode

- Java data type used: short
- XML output type: short

1.66 MemberStateCertificate

- Java data type used: Certificate
- XML output type: Certificate

1.67 MemberStatePublicKey

- Java data type used: PublicKey
- XML output type: PublicKey

1.68 Name

- Java data types used:
  - *codePage*: short
  - *name*: byte[]

- XML output types:
  - *codePage*: short
  - *name*: String, encoded as ISO 8859-<codePage>

1.69   NationAlpha

- Java data type used: String
- XML output type: String

1.70   NationNumeric

- Java data type used: short
- XML output type: short

1.71   NoOfCalibrationRecords

- Java data type used: short
- XML output type: short

1.72   NoOfCalibrationsSinceDownload

- Java data type used: int
- XML output type: int

1.73   NoOfCardPlaceRecords

- Java data type used: short
- XML output type: short

1.74   NoOfCardVehicleRecords

- Java data type used: int
- XML output type: int

1.75   NoOfCompanyActivityRecords

- Java data type used: int
- XML output type: int

1.76   NoOfControlActivityRecords

- Java data type used: int
- XML output type: int

1.77 NoOfEventsPerType

- Java data type used: short
- XML output type: short

1.78 NoOfFaultsPerType

- Java data type used: short
- XML output type: short

1.79 OdometerShort

- Java data type used: int
- XML output type: int

1.80 OdometerValueMidnight

- Java data type used: OdometerShort
- XML output type: OdometerShort

1.81 OverspeedNumber

- Java data type used: short
- XML output type: short

1.82 PlaceRecord

- Java data types used:
  - *entryTime*: TimeReal
  - *entryTypeDailyWorkPeriod*: EntryTypeDailyWorkPeriod
  - *dailyWorkPeriodCountry*: NationNumeric
  - *dailyWorkPeriodRegion*: RegionNumeric
  - *vehicleOdometerValue*: OdometerShort
- XML output types:
  - *entryTime*: TimeReal
  - *entryTypeDailyWorkPeriod*: EntryTypeDailyWorkPeriod
  - *dailyWorkPeriodCountry*: NationNumeric
  - *dailyWorkPeriodRegion*: RegionNumeric
  - *vehicleOdometerValue*: OdometerShort

1.83   PreviousVehicleInfo

- Java data types used:
  - *vehicleRegistrationIdentification*: VehicleRegistrationIdentification
  - *cardWithdrawalTime*: TimeReal
- XML output types:
  - *vehicleRegistrationIdentification*: VehicleRegistrationIdentification
  - *cardWithdrawalTime*: TimeReal

1.84   PublicKey

- Java data types used:
  - *rsaKeyModulus*: RSAKeyModulus
  - *rsaKeyPublicExponent*: RSAKeyPublicExponent
- XML output types:
  - *rsaKeyModulus*: RSAKeyModulus
  - *rsaKeyPublicExponent*: RSAKeyPublicExponent

1.85   RegionAlpha

- Java data type used: String
- XML output type: String

1.86   RegionNumeric

- Java data type used: byte
- XML output type: hexstring

1.87   RSAKeyModulus

- Java data type used: byte
- XML output type: hexstring

1.88   RSAKeyPrivateExponent

- Java data type used: byte
- XML output type: hexstring

1.89   RSAKeyPublicExponent

- Java data type used: byte
- XML output type: hexstring

1.90   SensorApprovalNumber

- Java data type used: String
- XML output type: String

1.91   SensorInstallationSecData

- Java data type used: TDesSessionKey
- XML output type: TdesSessionKey

1.92   SensorPaired

- Java data types used:
  - *sensorSerialNumber*: SensorSerialNumber
  - *sensorApprovalNumber*: SensorApprovalNumber
  - *sensorPairingDateFirst*: SensorPairingDate
- XML output types:
  - *sensorSerialNumber*: SensorSerialNumber
  - *sensorApprovalNumber*: SensorApprovalNumber
  - *sensorPairingDateFirst*: SensorPairingDate

1.93   SensorPairingDate

- Java data type used: TimeReal
- XML output type: TimeReal

1.94   SensorSerialNumber

- Java data type used: ExtendedSerialNumber
- XML output type: ExtendedSerialNumber

1.95   Signature

- Java data type used: byte[]
- XML output type: hexstring

1.96   SimilarEventsNumber

- Java data type used: short
- XML output type: short

1.97   SpecificConditionRecord

- Java data types used:
  - *entryTime*: TimeReal
  - *specificConditionType*: SpecificConditionType
- XML output types:
  - *entryTime*: TimeReal
  - *specificConditionType*: SpecificConditionType

1.98   SpecificConditionType

- Java data type used: short
- XML output type: short

1.99   Speed

- Java data type used: short
- XML output type: short

1.100   SpeedAuthorised

- Java data type used: Speed
- XML output type: Speed

1.101   SpeedAverage

- Java data type used: Speed
- XML output type: Speed

1.102   SpeedMax

- Java data type used: Speed
- XML output type: Speed

1.103   TDesSessionKey

- Java data types used:
  - *tDesKeyA*: byte[]
  - *tDesKeyB*: byte[]
- XML output types:
  - *tDesKeyA*: hexstring
  - *tDesKeyB*: hexstring

1.104　TimeReal

- Java data type used: long
- XML output type: String, date/time format: yyyy-MM-dd hh:mm:ss z

1.105　TyreSize

- Java data type used: String
- XML output type: String

1.106　VehicleIdentificationNumber

- Java data type used: String
- XML output type: String

1.107　VehicleRegistrationIdentification

- Java data types used:
  - *vehicleRegistrationNation*: NationNumeric
  - *vehicleRegistrationNumber*: VehicleRegistrationNumber
- XML output types:
  - *vehicleRegistrationNation*: NationNumeric
  - *vehicleRegistrationNumber*: VehicleRegistrationNumber

1.108　VehicleRegistrationNumber

- Java data types used:
  - *codePage*: short
  - *vehicleRegNumber*: byte[]
- XML output types:
  - *codePage*: short
  - *vehicleRegNumber*: String, encoded as ISO 8859-<codePage>

1.109　VuActivityDailyData

- Java data type used:
  - *noOfActivityChanges*: int
  - *ActivityChangeInfos*: Vector<ActivityChangeInfo>
- XML output type:
  - *ActivityChangeInfos*: Vector<ActivityChangeInfo>

1.110   VuApprovalNumber

- Java data type used: String
- XML output type: String

1.111   VuCalibrationData

- Java data type used:
  - *noOfVuCalibrationRecords*: short
  - *vuCalibrationRecords*: Vector<VuCalibrationRecord>
- XML output type:
  - *vuCalibrationRecords*: Vector<VuCalibrationRecord>

1.112   VuCalibrationRecord

- Java data types used:
  - *calibrationPurpose*: CalibrationPurpose
  - *workshopName*: Name
  - *workshopAddress*: Addres
  - *workshopCardNumber*: FullCardNumber
  - *workshopCardExpiryDate*: TimeReal
  - *vehicleIdentificationNumber*: VehicleIdentificationNumber
  - *vehicleRegistrationIdentification*: VehicleRegistrationIdentification
  - *wVehicleCharacteristicConstant*: W_VehicleCharacteristicConstant
  - *kConstantOfRecordingEquipment*: K_ConstantOfRecordingEquipment
  - *lTyreCircumference*: L_TyreCircumference
  - *tyreSize*: TyreSize
  - *authorisedSpeed*: SpeedAuthorised
  - *oldOdometerValue*: OdometerShort
  - *newOdometerValue*: OdometerShort
  - *oldTimeValue*: TimeReal
  - *newTimeValue*: TimeReal
  - *nextCalibrationDate*: TimeReal

- XML output types:
  - *calibrationPurpose*: CalibrationPurpose
  - *workshopName*: Name
  - *workshopAddress*: Addres
  - *workshopCardNumber*: FullCardNumber
  - *workshopCardExpiryDate*: TimeReal
  - *vehicleIdentificationNumber*: VehicleIdentificationNumber
  - *vehicleRegistrationIdentification*: VehicleRegistrationIdentification
  - *wVehicleCharacteristicConstant*: W_VehicleCharacteristicConstant
  - *kConstantOfRecordingEquipment*: K_ConstantOfRecordingEquipment
  - *lTyreCircumference*: L_TyreCircumference
  - *tyreSize*: TyreSize
  - *authorisedSpeed*: SpeedAuthorised
  - *oldOdometerValue*: OdometerShort
  - *newOdometerValue*: OdometerShort
  - *oldTimeValue*: TimeReal
  - *newTimeValue*: TimeReal
  - *nextCalibrationDate*: TimeReal

1.113   VuCardIWData

- Java data type used:
  - *noOfIWRecords*: int
  - *vuCardIWRecords*: Vector<VuCardIWRecord>
- XML output type:
  - *vuCardIWRecords*: Vector<VuCardIWRecord>

1.114 VuCardIWRecord

- Java data types used:
  - *cardHolderName*: HolderName
  - *fullCardNumber*: FullCardNumber
  - *cardExpiryDate*: TimeReal
  - *cardInsertionTime*: TimeReal
  - *vehicleOdometerValueAtInsertion*: OdometerShort
  - *cardSlotNumber*: CardSlotNumber
  - *cardWithdrawalTime*: TimeReal
  - *vehicleOdometerValueAtWithdrawal*: OdometerShort
  - *previousVehicleInfo*: PreviousVehicleInfo
  - *manualInputFlag*: ManualInputFlag
- XML output types:
  - *cardHolderName*: HolderName
  - *fullCardNumber*: FullCardNumber
  - *cardExpiryDate*: TimeReal
  - *cardInsertionTime*: TimeReal
  - *vehicleOdometerValueAtInsertion*: OdometerShort
  - *cardSlotNumber*: CardSlotNumber
  - *cardWithdrawalTime*: TimeReal
  - *vehicleOdometerValueAtWithdrawal*: OdometerShort
  - *previousVehicleInfo*: PreviousVehicleInfo
  - *manualInputFlag*: ManualInputFlag

1.115 VuCertificate

- Java data type used: Certificate
- XML output type: Certificate

1.116 VuCompanyLocksData

- Java data type used:
  - *noOfLocks*: short
  - *vuCompanyLocksRecords*: Vector<VuCompanyLocksRecord>
- XML output type:
  - *vuCompanyLocksRecords*: Vector<VuCompanyLocksRecord>

1.117 VuCompanyLocksRecord

- Java data types used:
  - *lockInTime*: TimeReal
  - *lockOutTime*: TimeReal
  - *companyName*: Name
  - *companyAddress*: Address
  - *companyCardNumber*: FullCardNumber
- XML output types:
  - *lockInTime*: TimeReal
  - *lockOutTime*: TimeReal
  - *companyName*: Name
  - *companyAddress*: Address
  - *companyCardNumber*: FullCardNumber

1.118 VuControlActivityData

- Java data type used:
  - *noOfControls*: short
  - *vuControlActivityRecords*: Vector<VuControlActivityRecord>
- XML output type:
  - *vuControlActivityRecords*: Vector<VuControlActivityRecord>

1.119 VuControlActivityRecord

- Java data types used:
  - *controlType*: ControlType
  - *controlTime*: TimeReal
  - *controlCardNumber*: FullCardNumber
  - *downloadPeriodBeginTime*: TimeReal
  - *downloadPeriodEndTime*: TimeReal
- XML output types:
  - *controlType*: ControlType
  - *controlTime*: TimeReal
  - *controlCardNumber*: FullCardNumber
  - *downloadPeriodBeginTime*: TimeReal
  - *downloadPeriodEndTime*: TimeReal

1.120   VuDataBlockCounter

- Java data type used: byte[]
- XML output type: BCDString

1.121   VuDetailedSpeedBlock

- Java data types used:
  - *speedBlockBeginDate*: TimeReal
  - *speedsPerSecond*: Speed[]
- XML output types:
  - *speedBlockBeginDate*: TimeReal
  - *speedsPerSecond*: Speed[]

1.122   VuDetailedSpeedData

- Java data types used:
  - *noOfSpeedBlocks*: int
  - *vuDetailedSpeedBlocks*: Vector<VuDetailedSpeedBlock>
- XML output types:
  - *vuDetailedSpeedBlocks*: Vector<VuDetailedSpeedBlock>

1.123   VuDownloadablePeriod

- Java data types used:
  - *minDownloadableTime*: TimeReal
  - *maxDownloadableTime*: TimeReal
- XML output types:
  - *minDownloadableTime*: TimeReal
  - *maxDownloadableTime*: TimeReal

1.124   VuDownloadActivityData

- Java data types used:
  - *downloadingTime*: TimeReal
  - *fullCardNumber*: FullCardNumber
  - *companyOrWorkShopName*: Name
- XML output types:
  - *downloadingTime*: TimeReal
  - *fullCardNumber*: FullCardNumber
  - *companyOrWorkShopName*: Name

1.125 VuEventData

- Java data types used:
  - *noOfVuEvents*: short
  - *vuEventRecords*: Vector<VuEventRecord>
- XML output types:
  - *vuEventRecords*: Vector<VuEventRecord>

1.126 VuEventRecord

- Java data types used:
  - *eventType*: EventFaultType
  - *eventRecordPurpose*: EventFaultRecordPurpose
  - *eventBeginTime*: TimeReal
  - *eventEndTime*: TimeReal
  - *cardNumberDriverSlotBegin*: FullCardNumber
  - *cardNumberCodriverSlotBegin*: FullCardNumber
  - *cardNumberDriverSlotEnd*: FullCardNumber
  - *cardNumberCodriverSlotEnd*: FullCardNumber
  - *similarEventsNumber*: SimilarEventsNumber
- XML output types:
  - *eventType*: EventFaultType
  - *eventRecordPurpose*: EventFaultRecordPurpose
  - *eventBeginTime*: TimeReal
  - *eventEndTime*: TimeReal
  - *cardNumberDriverSlotBegin*: FullCardNumber
  - *cardNumberCodriverSlotBegin*: FullCardNumber
  - *cardNumberDriverSlotEnd*: FullCardNumber
  - *cardNumberCodriverSlotEnd*: FullCardNumber
  - *similarEventsNumber*: SimilarEventsNumber

1.127 VuFaultData

- Java data types used:
  - *noOfVuFaults*: short
  - *vuFaultRecords*: Vector<VuFaultRecord>
- XML output types:
  - *vuFaultRecords*: Vector<VuFaultRecord>

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1.128 VuFaultRecord

- Java data types used:
  - *faultType*: EventFaultType
  - *faultRecordPurpose*: EventFaultRecordPurpose
  - *faultBeginTime*: TimeReal
  - *faultEndTime*: TimeReal
  - *cardNumberDriverSlotBegin*: FullCardNumber
  - *cardNumberCodriverSlotBegin*: FullCardNumber
  - *cardNumberDriverSlotEnd*: FullCardNumber
  - *cardNumberCodriverSlotEnd*: FullCardNumber
- XML output types:
  - *faultType*: EventFaultType
  - *faultRecordPurpose*: EventFaultRecordPurpose
  - *faultBeginTime*: TimeReal
  - *faultEndTime*: TimeReal
  - *cardNumberDriverSlotBegin*: FullCardNumber
  - *cardNumberCodriverSlotBegin*: FullCardNumber
  - *cardNumberDriverSlotEnd*: FullCardNumber
  - *cardNumberCodriverSlotEnd*: FullCardNumber

1.129 VuIdentification

- Java data types used:
  - *vuManufacturerName*: VuManufacturerName
  - *vuManufacturerAddress*: VuManufacturerAddress
  - *vuPartNumber*: VuPartNumber
  - *vuSerialNumber*: VuSerialNumber
  - *vuSoftwareIdentification*: VuSoftwareIdentification
  - *vuManufacturingDate*: VuManufacturingDate
  - *vuApprovalNumber*: VuApprovalNumber

- XML output types:
  - *vuManufacturerName*: VuManufacturerName
  - *vuManufacturerAddress*: VuManufacturerAddress
  - *vuPartNumber*: VuPartNumber
  - *vuSerialNumber*: VuSerialNumber
  - *vuSoftwareIdentification*: VuSoftwareIdentification
  - *vuManufacturingDate*: VuManufacturingDate
  - *vuApprovalNumber*: VuApprovalNumber

1.130   VuManufacturerAddress

- Java data type used: Address
- XML output type: Address

1.131   VuManufacturerName

- Java data type used: Name
- XML output type: Name

1.132   VuManufacturerAddress

- Java data type used: TimeReal
- XML output type: TimeReal

1.133   VuOverSpeedingControlData

- Java data types used:
  - *lastOverspeedControlTime*: TimeReal
  - *firstOverspeedSince*: TimeReal
  - *numberOfOverspeedSince*: OverspeedNumber
- XML output types :
  - *lastOverspeedControlTime*: TimeReal
  - *firstOverspeedSince*: TimeReal
  - *numberOfOverspeedSince*: OverspeedNumber

1.134   VuOverSpeedingEventData

- Java data types used:
  - *noOfOverSpeedingEvents*: short
  - *vuOverSpeedingEventRecords*: Vector<VuOverSpeedingEventRecord>
- XML output types:
  - *vuOverSpeedingEventRecords*: Vector<VuOverSpeedingEventRecord>

1.135   VuOverSpeedingEventRecord

- Java data types used:
  - *eventType*: EventFaultType
  - *eventRecordPurpose*: EventFaultRecordPurpose
  - *eventBeginTime*: TimeReal
  - *eventEndTime*: TimeReal
  - *maxSpeedValue*: SpeedMax
  - *averageSpeedValue*: SpeedAverage
  - *cardNumberDriverSlotBegin*: FullCardNumber
  - *similarEventsNumber*: SimilarEventsNumber
- XML output types:
  - *eventType*: EventFaultType
  - *eventRecordPurpose*: EventFaultRecordPurpose
  - *eventBeginTime*: TimeReal
  - *eventEndTime*: TimeReal
  - *maxSpeedValue*: SpeedMax
  - *averageSpeedValue*: SpeedAverage
  - *cardNumberDriverSlotBegin*: FullCardNumber
  - *similarEventsNumber*: SimilarEventsNumber

1.136   VuPartNumber

- Java data type used: String
- XML output type: String

1.137   VuPlaceDailyWorkPeriodData

- Java data types used:
  - *noOfPlaceRecords*: short
  - *vuOverSpeedingEventRecords*: Vector<VuOverSpeedingEventRecord>
- XML output types:
  - *vuOverSpeedingEventRecords*: Vector<VuOverSpeedingEventRecord>

1.138   VuPlaceDailyWorkPeriodRecord

- Java data types used:
  - *fullCardNumber*: FullCardNumber
  - *placeRecord*: PlaceRecord
- XML output types:
  - *fullCardNumber*: FullCardNumber
  - placeRecord: PlaceRecord

1.139   VuPrivateKey

- Java data type used: RSAKeyPrivateExponent
- XML output type: RSAKeyPrivateExponent

1.140   VuPublicKey

- Java data type used: PublicKey
- XML output type: PublicKey

1.141   VuSerialNumber

- Java data type used: ExtendedSerialNumber
- XML output type: ExtendedSerialNumber

1.142   VuSoftInstallationDate

- Java data type used: TimeReal
- XML output type: TimeReal

1.143   VuSoftwareIdentification

- Java data types used:
  - *vuSoftwareVersion*: VuSoftwareVersion
  - *vuSoftInstallationDate*: VuSoftInstallationDate
- XML output types:
  - *vuSoftwareVersion*: VuSoftwareVersion
  - *vuSoftInstallationDate*: VuSoftInstallationDate

1.144   VuSoftwareVersion

- Java data type used: String
- XML output type: String

1.145   VuSpecificConditionData

- Java data types used:
  - *noOfSpecificConditionsRecords*: int
  - *specificConditionRecords*: Vector<SpecificConditionRecord>
- XML output types:
  - *specificConditionRecords*: Vector<SpecificConditionRecord>

1.146   VuTimeAdjustmentData

- Java data types used:
  - *noOfVuTimeAdjRecords*: short
  - *vuTimeAdjustmentRecords*: Vector<vuTimeAdjustmentRecord>
- XML output types:
  - *vuTimeAdjustmentRecords*: Vector<vuTimeAdjustmentRecord>

1.147   VuTimeAdjustmentRecord

- Java data types used:
  - *oldTimeValue*: TimeReal
  - *newTimeValue*: TimeReal
  - *workshopName*: Name
  - *workshopAddress*: Address
  - *workshopCardNumber*: FullCardNumber

- XML output types:
  - *oldTimeValue*: TimeReal
  - *newTimeValue*: TimeReal
  - *workshopName*: Name
  - *workshopAddress*: Address
  - *workshopCardNumber*: FullCardNumber

1.148   W_VehicleCharacteristicConstant

- Java data type used: int
- XML output type: int

1.149   WorkshopCardApplicationIdentification

- Java data types used:
  - *typeOfTachographCardId*: EquipmentType
  - *cardStructureVersion*: CardStructureVersion
  - *noOfEventsPerType*: NoOfEventsPerType
  - *noOfFaultsPerType*: NoOfFaultsPerType
  - *activityStructureLength*: ActivityStructureLength
  - *noOfCardVehicleRecords*: NoOfCardVehicleRecords
  - *noOfCardPlaceRecords*: NoOfCardPlaceRecords
  - *noOfCalibrationRecords*: NoOfCalibrationRecords
- XML output types:
  - *typeOfTachographCardId*: EquipmentType
  - *cardStructureVersion*: CardStructureVersion
  - *noOfEventsPerType*: NoOfEventsPerType
  - *noOfFaultsPerType*: NoOfFaultsPerType
  - *activityStructureLength*: ActivityStructureLength
  - *noOfCardVehicleRecords*: NoOfCardVehicleRecords
  - *noOfCardPlaceRecords*: NoOfCardPlaceRecords
  - *noOfCalibrationRecords*: NoOfCalibrationRecords

1.150   WorkshopCardCalibrationData

- Java data types used:
  - *calibrationTotalNumber*: int
  - *calibrationPointerNewestRecord*: short
  - *calibrationRecords*: Vector<WorkshopCardCalibrationRecord>
- XML output types:
  - *calibrationTotalNumber*: int
  - *calibrationPointerNewestRecord*: short
  - *calibrationRecords*: Vector<WorkshopCardCalibrationRecord>

1.151   WorkshopCardCalibrationRecord

- Java data types used:
  - *calibrationPurpose*: CalibrationPurpose
  - *vehicleIdentificationNumber*: VehicleIdentificationNumber
  - *vehicleRegistration*: VehicleRegistrationIdentification
  - *wVehicleCharacteristicConstant*: W_VehicleCharacteristicConstant
  - *lTyreCircumference*: L_TyreCircumference
  - *tyreSize*: TyreSize
  - *authorisedSpeed*: SpeedAuthorised
  - *oldOdometerValue*: OdometerShort
  - *newOdometerValue*: OdometerShort
  - *oldTimeValue*: TimeReal
  - *newTimeValue*: TimeReal
  - *nextCalibrationDate*: TimeReal
  - *vuPartNumber*: VuPartNumber
  - *vuSerialNumber*: VuSerialNumber
  - *sensorSerialNumber*: SensorSerialNumber

- XML output types:
  - *calibrationPurpose*: CalibrationPurpose
  - *vehicleIdentificationNumber*: VehicleIdentificationNumber
  - *vehicleRegistration*: VehicleRegistrationIdentification
  - *wVehicleCharacteristicConstant*: W_VehicleCharacteristicConstant
  - *lTyreCircumference*: L_TyreCircumference
  - *tyreSize*: TyreSize
  - *authorisedSpeed*: SpeedAuthorised
  - *oldOdometerValue*: OdometerShort
  - *newOdometerValue*: OdometerShort
  - *oldTimeValue*: TimeReal
  - *newTimeValue*: TimeReal
  - *nextCalibrationDate*: TimeReal
  - *vuPartNumber*: VuPartNumber
  - *vuSerialNumber*: VuSerialNumber
  - *sensorSerialNumber*: SensorSerialNumber

1.152   WorkshopCardHolderIdentification

- Java data types used:
  - *workshopName*: Name
  - *workshopAddress*: Address
  - *cardHolderName*: HolderName
  - *cardHolderPreferredLanguage*: Language
- XML output types:
  - *workshopName*: Name
  - *workshopAddress*: Address
  - *cardHolderName*: HolderName
  - *cardHolderPreferredLanguage*: Language