

# NORMALIZED TABLE EXAMPLE

```
{
  "base_payment": {
    "payment_header": {
      "payment_id": "string", // Universal unique identifier
      "payment_type": "enum", // SWIFT, ACH, WIRE, RTP, SEPA, etc.
      "version": "string",    // Schema version
      "created_at": "datetime",
      "updated_at": "datetime",
      "status": "enum"        // RECEIVED, PROCESSING, COMPLETED, etc.
    },
    "amount": {
      "value": "decimal",
      "currency": "string",
      "exchange_info": {
        "target_currency": "string",
        "exchange_rate": "decimal",
        "rate_type": "string",
        "quote_id": "string"
      }
    }
  },
  "parties": {
    "originator": {
      "party_type": "enum", // INDIVIDUAL, CORPORATE, FINANCIAL_INSTITUTION
      "party_id": "string",
      "name": "string",
      "account_info": {
        "account_id": "string",
        "account_type": "enum",
        "routing_info": {
          "type": "enum", // ABA, SWIFT, IBAN, etc.
          "value": "string"
        }
      }
    },
    "contact_info": {
      "address": {
        "street": "string",
        "city": "string",
        "state": "string",
        "postal_code": "string",
        "country": "string"
      }
    }
  }
}
```

```

    },
    "electronic": {
        "email": "string",
        "phone": "string"
    }
},
"beneficiary": {
    // Same structure as originator
},
"intermediaries": [
    // Array of institutions involved in payment routing
    {
        "role": "enum",    // CORRESPONDENT, CLEARING, PROCESSING
        "institution_id": "string",
        "routing_info": {} // Same as above routing_info
    }
]
},
"processing": {
    "priority": "enum",    // HIGH, NORMAL, LOW
    "processing_window": "enum", // SAME_DAY, NEXT_DAY, etc.
    "scheduling": {
        "submission_date": "datetime",
        "effective_date": "datetime",
        "settlement_date": "datetime"
    },
    "status_tracking": {
        "current_status": "string",
        "status_history": [
            {
                "status": "string",
                "timestamp": "datetime",
                "description": "string"
            }
        ]
    }
},
"references": {
    "end_to_end_id": "string",
    "transaction_id": "string",
    "related_references": [
        {
            "type": "string",

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```

        "value": "string"
    }
]
},
"remittance_info": {
    "type": "enum",          // STRUCTURED, UNSTRUCTURED
    "purpose_code": "string",
    "description": "string",
    "structured_data": {
        "references": [],
        "line_items": []
    }
}
},
"type_specific_data": {
    // ACH specific
    "ach_data": {
        "sec_code": "string",
        "batch_data": {},
        "addenda": []
    },
    // Wire specific
    "wire_data": {
        "message_type": "string",
        "charges_instruction": "string"
    },
    // SEPA specific
    "sepa_data": {
        "scheme": "string",
        "mandate_info": {}
    },
    // RTP specific
    "rtp_data": {
        "clearing_system": "string",
        "settlement_method": "string"
    }
},
"regulatory": {
    "compliance_checks": {
        "sanctions_check": {
            "status": "string",
            "timestamp": "datetime",
            "reference": "string"
        },

```

```

    "aml_check": {},
    "fraud_check": {}
  },
  "reporting": {
    "reporting_requirements": [],
    "regulatory_jurisdiction": "string"
  }
},
"metadata": {
  "source_system": "string",
  "business_unit": "string",
  "processing_tags": [],
  "custom_attributes": {}
}
}

```

## ACH EXAMPLE

```

{
  "payment_id": "ACH-2024-123456",
  "payment_type": "ACH",
  "transaction_details": {
    "sec_code": "CCD", // Corporate Credit/Debit
    "transaction_type": "CREDIT",
    "priority": "SAME_DAY",
    "batch_id": "BATCH2024001",
    "addenda_indicator": true
  },
  "amount": {
    "value": 150000.00,
    "currency": "USD"
  },
  "originator": {
    "company_id": "1234567890",
    "company_name": "ACME CORP",
    "account_number": "9876543210",
    "routing_number": "121000248",
    "account_type": "CHECKING",
    "odfi_id": "12100024"
  },
  "receiver": {
    "account_number": "1234567890",
    "routing_number": "122105155",

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```

    "account_type": "CHECKING",
    "name": "JOHN DOE COMPANY",
    "id_type": "EIN",
    "id_number": "12-3456789"
  },
  "addenda": {
    "type_code": "05",
    "payment_related_info": "INVOICE 123456",
    "addenda_sequence_number": 1,
    "entry_detail_sequence_number": 1
  },
  "scheduling": {
    "effective_date": "2024-03-10",
    "processing_window": "MORNING",
    "settlement_date": "2024-03-11"
  },
  "status": {
    "current_status": "PENDING",
    "status_timestamp": "2024-03-09T10:30:00Z",
    "reversible": true
  }
}

```

## WIRE TRANSFER EXAMPLE

```

{
  "payment_id": "WIRE-2024-789012",
  "payment_type": "WIRE",
  "wire_type": "DOMESTIC", // or INTERNATIONAL
  "transaction_details": {
    "priority": "HIGH",
    "transfer_type": "CUSTOMER_TRANSFER",
    "message_type": "MT103",
    "category_purpose": "BUSINESS"
  },
  "amount": {
    "value": 1000000.00,
    "currency": "USD",
    "exchange_rate": null, // Used for international wires
    "charges": {
      "type": "OUR", // OUR, BEN, SHA
      "amount": 45.00
    }
  }
}

```

```
    },
  },
  "originator": {
    "name": "GLOBAL TECH INC",
    "account_number": "12345678901",
    "routing_number": "121000248",
    "address": {
      "street": "100 Technology Pkwy",
      "city": "San Francisco",
      "state": "CA",
      "postal_code": "94105",
      "country": "US"
    },
  },
  "bank": {
    "name": "CHASE",
    "swift_code": "CHASUS33",
    "fedwire_code": "021000021"
  },
},
"beneficiary": {
  "name": "EURO SUPPLIES GMBH",
  "account_number": "DE89370400440532013000",
  "bank": {
    "name": "DEUTSCHE BANK",
    "swift_code": "DEUTDEFF",
    "branch": "FRANKFURT MAIN"
  },
  "address": {
    "street": "Mainzer Landstrasse 100",
    "city": "Frankfurt",
    "postal_code": "60325",
    "country": "DE"
  },
},
"intermediary_bank": {
  "name": "CITIBANK NA",
  "swift_code": "CITIUS33",
  "account_number": "36001234"
},
"references": {
  "sender_reference": "SFGB2024789012",
  "beneficiary_reference": "INV2024001",
  "originator_reference": "PO2024005"
},
```

```
"regulatory_reporting": {
  "purpose_code": "TRADE",
  "customer_type": "CORPORATE",
  "screening_status": "APPROVED",
  "compliance_checks": {
    "ofac_status": "CLEARED",
    "sanctions_status": "CLEARED",
    "timestamp": "2024-03-09T10:15:00Z"
  }
}
}
```

## REAL TIME PAYMENT EXAMPLE

```
{
  "payment_id": "RTP-2024-901234",
  "payment_type": "RTP",
  "transaction_details": {
    "priority": "HIGH",
    "settlement_method": "INSTANT",
    "clearing_system": "TCH_RTP",
    "message_type": "CREDIT_TRANSFER",
    "processing_mode": "REAL_TIME"
  },
  "amount": {
    "value": 15000.00,
    "currency": "USD",
    "max_amount_limit": 100000.00
  },
  "originator": {
    "participant_id": "123456",
    "bank_id": "121000248",
    "account_number": "1234567890",
    "name": "TECH STARTUPS INC",
    "category": "BUSINESS",
    "account_type": "CHECKING"
  },
  "receiver": {
    "participant_id": "789012",
    "bank_id": "122235821",
    "account_number": "0987654321",
    "name": "JOHN SMITH",
  }
}
```

```
    "category": "PERSONAL",
    "proxy_id": {
      "type": "EMAIL",
      "value": "john.smith@email.com"
    }
  },
  "remittance_data": {
    "type": "STRUCTURED",
    "purpose_code": "SALA",
    "end_to_end_id": "E2E-123456789",
    "remittance_info": {
      "reference_numbers": ["INV001", "PO789"],
      "free_text": "March 2024 Salary"
    }
  },
  "timing": {
    "submission_timestamp": "2024-03-09T14:30:00.123Z",
    "expiry_timestamp": "2024-03-09T14:35:00.123Z",
    "settlement_timestamp": "2024-03-09T14:30:02.456Z"
  },
  "status_tracking": {
    "current_status": "COMPLETED",
    "status_history": [
      {
        "status": "RECEIVED",
        "timestamp": "2024-03-09T14:30:00.123Z"
      },
      {
        "status": "VALIDATED",
        "timestamp": "2024-03-09T14:30:01.234Z"
      },
      {
        "status": "COMPLETED",
        "timestamp": "2024-03-09T14:30:02.456Z"
      }
    ]
  },
  "confirmation": {
    "confirmation_id": "CONF123456",
    "confirmation_timestamp": "2024-03-09T14:30:02.789Z",
    "settlement_confirmation": "TCH123456789"
  }
}
```



# CHECK PAYMENT SCHEMA

```
{
  "payment_id": "CHECK-2024-345678",
  "payment_type": "CHECK",
  "check_details": {
    "check_number": "1001",
    "check_type": "BUSINESS",
    "issue_date": "2024-03-09",
    "presentation_type": "PAPER", // or IMAGE
    "memo": "Contract Payment March 2024"
  },
  "amount": {
    "value": 25000.00,
    "currency": "USD",
    "amount_in_words": "Twenty Five Thousand and 00/100"
  },
  "drawer": {
    "account_number": "12345678901",
    "routing_number": "121000248",
    "bank_name": "CHASE",
    "account_type": "CHECKING",
    "name": "TECH SOLUTIONS INC",
    "address": {
      "street": "200 Business Ave",
      "city": "Chicago",
      "state": "IL",
      "postal_code": "60601"
    }
  },
  "payee": {
    "name": "OFFICE SUPPLIES CO",
    "endorsement_type": "BUSINESS",
    "deposit_account": {
      "account_number": "9876543210",
      "routing_number": "122105155",
      "bank_name": "US BANK"
    }
  },
  "processing": {
    "capture_type": "REMOTE_DEPOSIT",
    "processing_status": "PENDING",
    "clearing_channel": "FED",
    "hold_policy": {
```

```
        "hold_type": "REGULATORY",
        "hold_days": 2,
        "release_date": "2024-03-11"
    }
},
"image_data": {
    "front_image": "base64_encoded_image_front",
    "back_image": "base64_encoded_image_back",
    "micr_line": "121000248:12345678901:1001",
    "image_quality": {
        "front_quality_score": 98,
        "back_quality_score": 95,
        "micr_confidence": "HIGH"
    }
}
}
```

## SEPA TRANSFER

```
{
  "payment_id": "SEPA-2024-567890",
  "payment_type": "SEPA_CREDIT_TRANSFER",
  "scheme": "SCT_INST", // or SCT for regular
  "transaction_details": {
    "instruction_id": "INSTR2024001",
    "end_to_end_id": "E2E2024001",
    "service_level": "SEPA",
    "local_instrument": "INSTANT",
    "category_purpose": "SUPP"
  },
  "amount": {
    "value": 45000.00,
    "currency": "EUR",
    "charge_bearer": "SLEV"
  },
  "originator": {
    "name": "FRENCH TECH SARL",
    "iban": "FR7630006000011234567890189",
    "bic": "BNPAFRPP",
    "address": {
      "street": "123 Rue de la Paix",
      "city": "Paris",
      "postal_code": "75001",

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```

        "country": "FR"
      },
      "organisation_id": {
        "type": "SIREN",
        "value": "123456789"
      }
    },
    "beneficiary": {
      "name": "DEUTSCHE SERVICES GMBH",
      "iban": "DE89370400440532013000",
      "bic": "DEUTDEFF",
      "address": {
        "street": "Hauptstrasse 123",
        "city": "Berlin",
        "postal_code": "10115",
        "country": "DE"
      }
    },
    "remittance_information": {
      "unstructured": "Invoice 123456",
      "structured": {
        "creditor_reference": "RF18539007547034",
        "type": "SCOR"
      }
    },
    "regulatory": {
      "batch_booking": false,
      "purpose_code": "SUPP",
      "regulatory_reporting": [
        {
          "authority_name": "EUROPEAN_CENTRAL_BANK",
          "details": "STATISTICAL_REPORTING"
        }
      ]
    }
  }
}

```

## CARD PAYMENT EXAMPLE

```

{
  "payment_id": "CARD-2024-901234",
  "payment_type": "CARD_PAYMENT",

```

```
"transaction_details": {
  "type": "PURCHASE",
  "card_present": true,
  "entry_mode": "CHIP",
  "terminal_id": "TERM123456",
  "merchant_id": "MERCH789012"
},
"amount": {
  "transaction_amount": 156.78,
  "currency": "USD",
  "tip_amount": 20.00,
  "cashback_amount": 0.00
},
"card_data": {
  "pan_last_4": "1234",
  "token": "TOKEN123456",
  "expiry": "12/25",
  "card_type": "CREDIT",
  "network": "VISA"
},
"authorization": {
  "auth_code": "AUTH123",
  "response_code": "00",
  "avs_result": "Y",
  "cvv_result": "M"
}
}
```

## STANDING ORDER EXAMPLE

```
{
  "standing_order_id": "SO-2024-345678",
  "payment_type": "STANDING_ORDER",
  "schedule": {
    "frequency": "MONTHLY",
    "execution_day": 15,
    "start_date": "2024-03-15",
    "end_date": "2025-03-15",
    "next_execution": "2024-04-15",
    "previous_execution": "2024-03-15"
  },
  "payment_details": {
    "amount": 1000.00,
```

```

    "currency": "GBP",
    "reference": "RENT PAYMENT"
  },
  "status_tracking": {
    "current_status": "ACTIVE",
    "last_execution_status": "SUCCESS",
    "failed_attempts": 0,
    "next_retry_date": null
  }
}

```

## MOBILE P2P PAYMENTS

```

{
  "payment_id": "P2P-2024-789012",
  "payment_type": "P2P",
  "service_provider": {
    "name": "ZELLE", // or VENMO, PAYPAL
    "transaction_id": "ZL123456789",
    "service_type": "INSTANT"
  },
  "transfer_details": {
    "amount": 500.00,
    "currency": "USD",
    "purpose": "SPLIT_BILL",
    "message": "Dinner last night"
  },
  "sender": {
    "id": "user123@bank.com",
    "name": "JANE SMITH",
    "device_id": "DEVICE123",
    "phone": "+1234567890",
    "bank_details": {
      "bank_id": "123456789",
      "account_number": "*****1234",
      "account_type": "CHECKING"
    }
  },
  "receiver": {
    "id": "john@email.com",
    "name": "JOHN DOE",
    "phone": "+1987654321",

```

```
    "proxy_type": "EMAIL" // or PHONE, USERNAME
  },
  "risk_assessment": {
    "device_fingerprint": "FP123456",
    "ip_address": "192.168.1.1",
    "risk_score": 15,
    "velocity_check": "PASSED"
  }
}
```

## DIRECT DEBIT

```
{
  "payment_id": "DD-2024-456789",
  "payment_type": "DIRECT_DEBIT",
  "scheme": {
    "type": "SEPA_DIRECT_DEBIT", // or ACH_DEBIT, BACS_DIRECT_DEBIT
    "service_type": "CORE", // or B2B
    "recurring_type": "RCUR" // FRST, RCUR, FNAL, OOFF
  },
  "mandate": {
    "mandate_id": "MNDT2024001",
    "date_of_signature": "2024-01-15",
    "status": "ACTIVE",
    "amendment_indicator": false,
    "max_amount": 5000.00,
    "frequency": "MONTHLY",
    "final_date": "2025-01-15"
  },
  "collection_details": {
    "amount": 1500.00,
    "currency": "EUR",
    "collection_date": "2024-03-15",
    "sequence_type": "RECURRING",
    "purpose_code": "UTIL"
  },
  "creditor": {
    "name": "UTILITY COMPANY SA",
    "identifier": "FR123ZZZ456789", // Creditor ID
    "iban": "FR7630006000011234567890189",
    "bic": "BNPAFRPP",
    "scheme_identifier": "FR12ZZZ123456"
  },
}
```

```
"debtor": {  
  "name": "JOHN DOE",  
  "iban": "DE89370400440532013000",  
  "bic": "DEUTDEFF",  
  "address": {  
    "street": "Musterstrasse 123",  
    "city": "Berlin",  
    "postal_code": "10115",  
    "country": "DE"  
  }  
}
```