

# INSPIRE

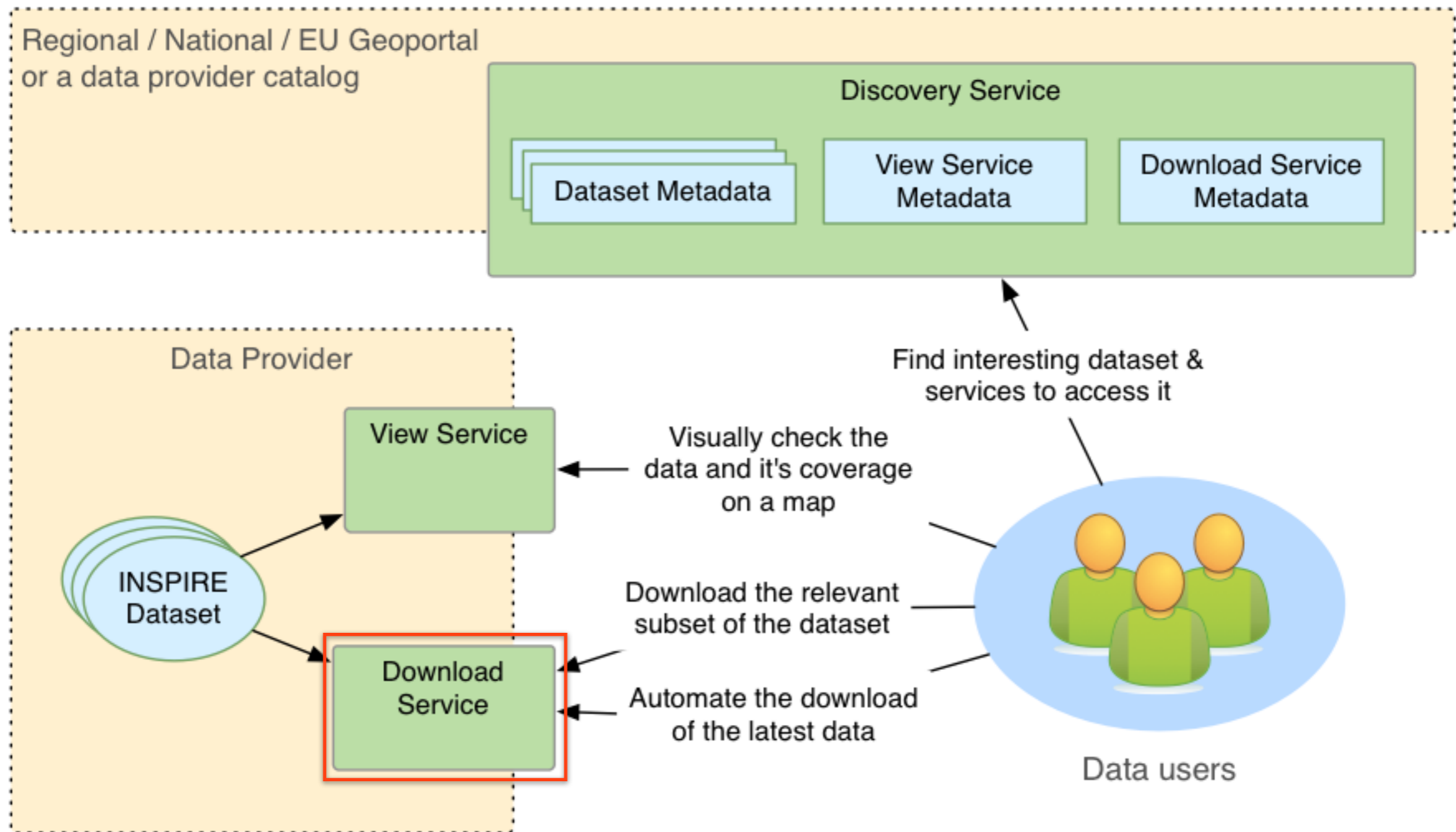
# Download Services

## A Quick Overview

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Choosing the Right INSPIRE Download Service Technologies Workshop  
INSPIRE Conference 2016, Barcelona  
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# INSPIRE Download Service



# Legal Requirements

## Network Services Implementing Rules (EC Regulation 976/2009)

- Annex IV, Part A: Basic operations
  - Get Download Service Metadata
  - Get Spatial Data Set
  - Describe Spatial Data Set
  - Link Download Service
- Annex IV, Part B: Direct access operations
  - Get Spatial Object
  - Describe Spatial Object Type
- Annex IV, Part C: Search criteria for Get Spatial Object operation

Abstract operations required  
from any implementation

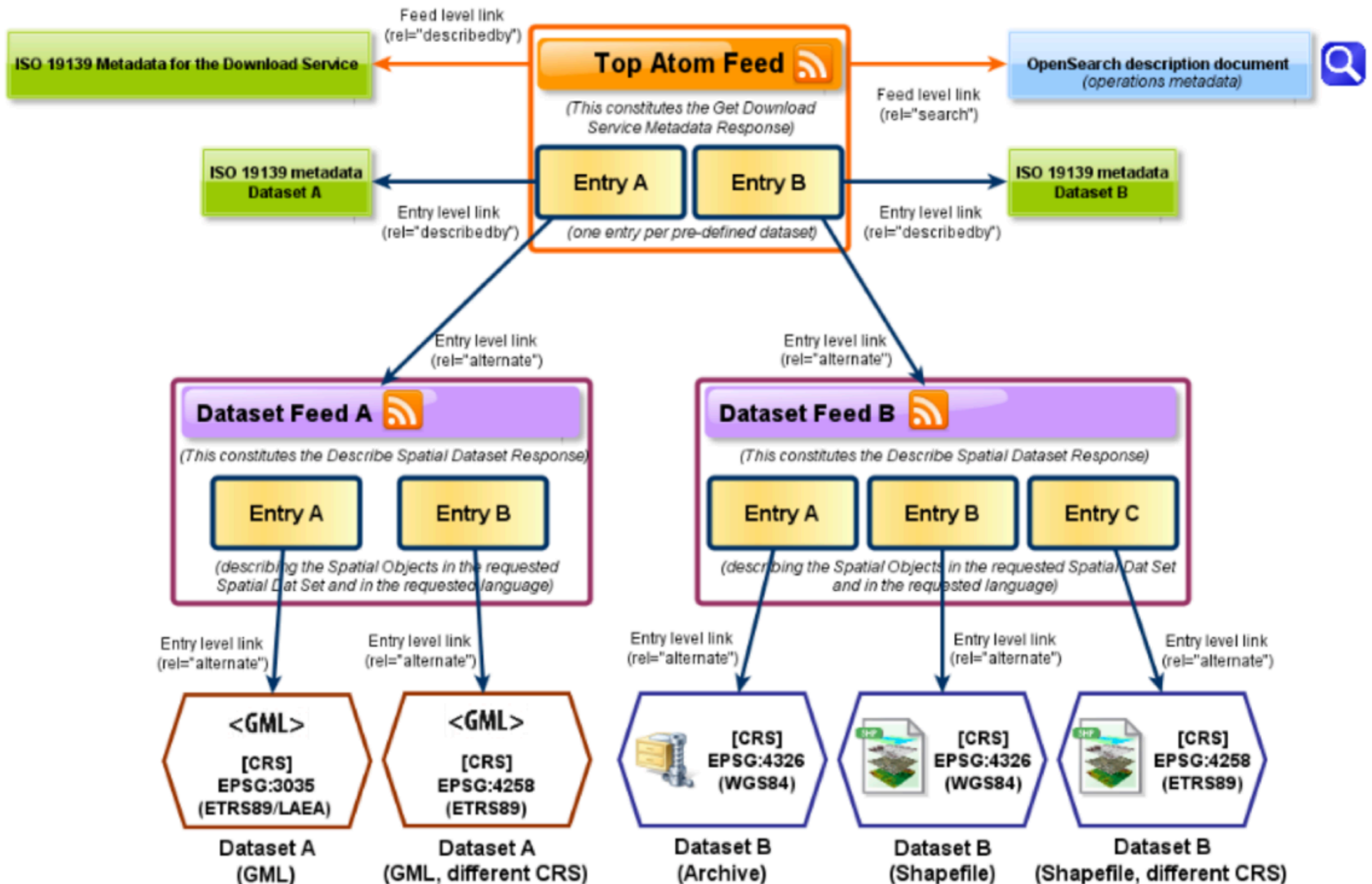
# Technical Guidance

## Technical Guidance for the implementation of INSPIRE Download Services

- Version 3.1 (Aug 2013) specifies INSPIRE Download Service using
  - Atom+OpenSearch (pre-defined datasets only),
  - OGC WFS 2.0 for pre-defined datasets,
  - OGC WFS 2.0 for direct access (filter & extract)
- INSPIRE MIG is creating guidance for
  - OGC SOS 2.0 (pre-defined & direct access, MIWP-7a)
  - OGC WCS 2.0/2.1 (predefined & direct access, MIWP-7b)

Technical requirements  
and guidance for data providers

# Atom+OpenSearch



# Atom + OpenSearch

## Mapping of abstract Download Service operations

Get Download Service Metadata	Atom Download <b>Service Feed</b> (top-level)
Get Spatial Data Set	OpenSeach query with CRS, Spatial Data Set Identifier and language as parameters returning the matching data resource (or an Atom feed for multi-part datasets).
Describe Spatial Data Set	OpenSearch query with spatial data set identifier and language returning a <b>Dataset Feed</b> .
Link Download Service	Using Discovery Service populated by the INSPIRE metadata description for the service.
Get Spatial Object	Not available
Describe Spatial Object Type	Not available

# OGC WFS + Filter Encoding

## Mapping of abstract Download Service operations

Get Download Service Metadata	GetCapabilities with language support.
Get Spatial Data Set	GetFeature using a special INSPIRE Stored query "GetSpatialDataSet" with dataset ID, CRS and language parameters.
Describe Spatial Data Set	GetCapabilities with language support. Thus separate endpoints required for each dataset.
Link Download Service	Using Discovery Service populated by the INSPIRE metadata description for the service.
Get Spatial Object	GetFeature with ad hoc queries & language support.
Describe Spatial Object Type	DescribeFeatureType returning XML Schemas.

# OGC SOS-based INSPIRE Download Service

- INSPIRE MIG Work Package 7a, work started in December 2014.
- Intention to be more convenient for INSPIRE observation (O&M) datasets than the WFS implementation.
- Mappings between Pre-defined dataset and Direct access abstract operations and Sensor Observation Service (SOS) 2.0.



# OGC WCS-based INSPIRE Download Service

- INSPIRE MIG Work Package 7b, work started in June 2015.
- Intention to be more convenient and efficient for INSPIRE coverage datasets and the WFS implementation.
- Mappings between Pre-defined dataset and Direct access abstract operations and Web Coverage Service (WCS) 2.0/2.1.