

John Owen, CDISC Head of Project Management Office

Dave Iberson-Hurst, CDISC DDF Product Owner

Chris Upkes, DDF Developer

4th April 2022



Timelines for the MVP*

2021	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
										W1	1/2	
DDF								Stage 0		3a	ge 1/2	
	l											
2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	Jan	Feb	Mar w2			Jun w ₃	Jul	Aug	Sep	Oct	Nov	Dec
2022	Jan	Feb Stage 1/2		Apr Stage			Jul	Aug	Sep	Oct	Nov	Dec





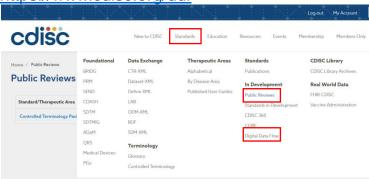
Public Review Timetable

- Tuesday 22nd March 2022 DDF Public Review Webinar
- Tuesday 29th March 2022 DDF Materials sent out for review Start of 30day public review
- Monday 4th April 2022 10:00-11:00 US Eastern Time DDF Public Review Workshop – open invite (details on the DDF Public Review Webinar Page)
- Friday 29th April 2022 DDF Public Review Commenting Period ends



Public Review Materials

- Email will be sent from CDISC Communications
- Public Review information will also be available from the Public Review section of the CDISC website
 - https://www.cdisc.org/public-reviews
 - https://www.cdisc.org/ddf



Links will direct reviewers to the DDF Public Review Dashboard



DDF Public Review Dashboard

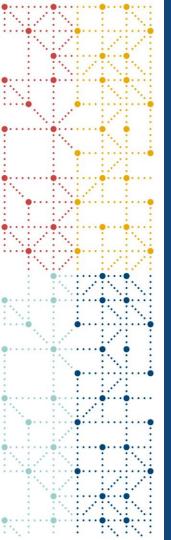
All Public Review comments should be entered into the DDF JIRA Project as JIRA tickets
 You will need to log in or register for the CDISC Wiki to provide comments.

> Click here to expand instructions for entering JIRA comments

. Register for the Wikk If you already have an account on Wiki or JIRA, our issue-tracking system, simply log in to your account; Wiki and JIRA use the same login credentials. CDISC Wiki is a different login from www.cdisc.org.

DDF Public Review Dashboard The CDISC standards Development Process The DDF Standards are now entering the public review commenting period after completing the standards development and internal review phases Introduction The purpose of the Public Review is to develop widespread consensus for the proposed standard by allowing for broad comment by the general public. Anyone interested may review and submit comments which must be reviewed and addressed by teams before proceeding to publication (CDISC-COP-001) Additional information on the overall aims of the DDF project can be found on the TransCelerate DDF Website · Additional information is available in the TransCelerate press release about the DDF project Public Review Timelines Timelines The Public Review commenting period will be open for 30-days. Public Review Commenting Start Date - 📫 29 Mar 2022 Public Review Commenting End Date - @ 29 Apr 2022 A recording of the Public Review Webinar from 22nd March 2022 can be found here «insert link». It is recommended that you watch this recording to gain a deeper understanding of the materials that are being sent for Public Review. The slide deck «insert link» used in the webinar is also available. Webinar Summary Webinar Wahinar Introduction Dave Evans TransCelerate and DDF Alison Luckman Public Review Process What should you review? Please be aware that some of the deliverables that are being developed may be out of your skill set. . The DDF review team is made up of experts in all the areas that the deliverables cover. We appreciate any comments that you can provide that you feel you can provide input on. Deliverable CDISC What would people Review Files Available for Files Standard Public Review Unified Study **Materials** (USDM) Class If you are unfamiliar with UML, Section 5.6 of the BRIDG Users Guide might be used as a model for a "Basics of UML" guide for DDF API Specification JSON and HTML formats Eveal format (for The controlled terminology (normative) developed for the project DDF Controlled Terminology_Public Review_FINALxisx Terminology ease of searching and filtering). Essential User The User Stories. PDF Document Architecture DDF CDISC RA GGG - Architecture_Principles - 2021-02-23.pdf The architectural principles developed by the project Principles Supporting A set of informational materials in PDF format to help understand the deliverables being reviewed PDF documents or Using the DDF JIRA project for commenting Commenting

Digital Data Flow Model Walkthrough cdisc



Review Materials

Slides from public review

CDISC Study Definition Repository RA Deliverables



Unified Study Definitions Model (USDM) Class Diagram

The UML class diagram (normative) as well as SQL Data Dictionary, Entity Relationship Diagram and example JSON output (informative)



Application Programming Interface (API) Specification

The API definition (normative) in JSON and HTML forms



CDISC Controlled Terminology

The controlled terminology (normative) developed for the project. Provided in an Excel format so as to be easily searched and filtered.



Reference Architecture Conformance Tests

Provided by the functionality provided by tools such as SwaggerHub and Postman



Essential Users Stories

The User Stories. PDF document



Architecture Principles

The architectural principles developed by the project. PDF Document



Supporting Materials

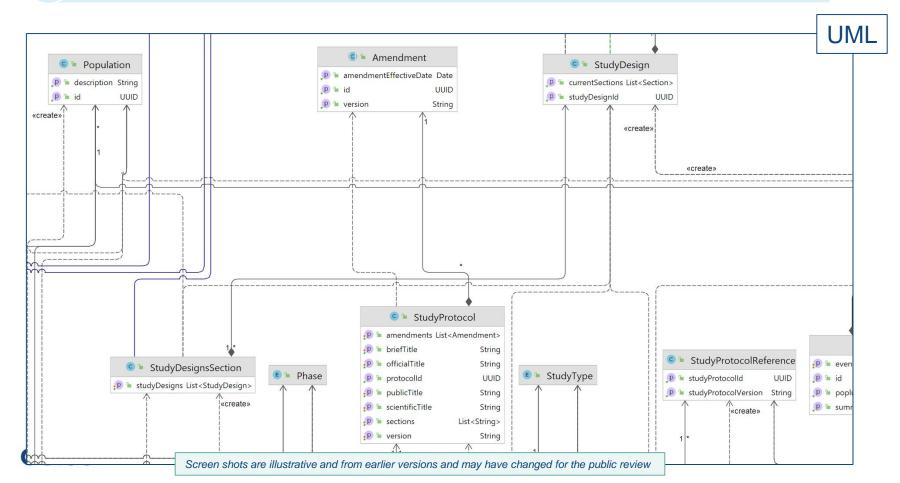
A set of informational materials in PDF format to help understand the deliverables being reviewed. PDF documents or references.





Unified Study Definitions Model (USDM) Class Diagram

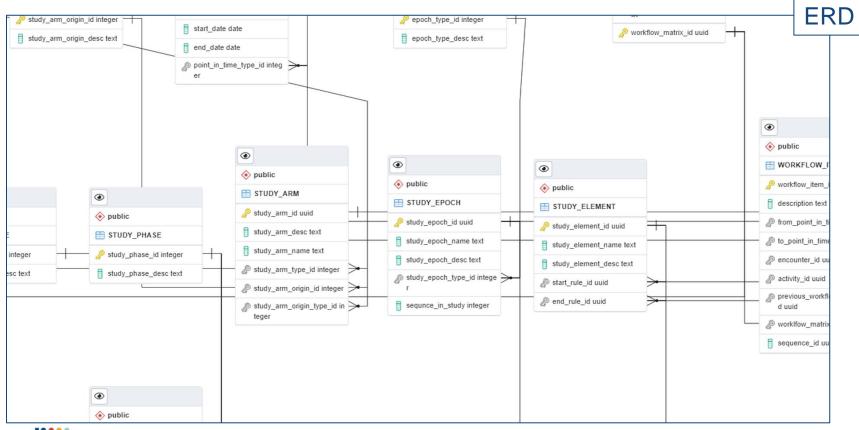
The UML class diagram (normative) as well as SQL Data Dictionary, Entity Relationship Diagram and example JSON output (informative)





Unified Study Definitions Model (USDM) Class Diagram

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Unified Study Definitions Model (USDM) Class Diagram

The UML class diagram (normative) as well as SQL Data Dictionary, Entity Relationship Diagram and example JSON output (informative)

```
SQL DD
 This script was generated by a beta version of the ERD too

    Please log an issue at https://redmine.postgresql.org/proj

BEGIN:
CREATE TABLE IF NOT EXISTS public."STUDY"
   study id uuid NOT NULL,
   study_title text NOT NULL,
   study version text NOT NULL.
   study tag text,
   study_type_id integer NOT NULL,
   study_phase_id integer NOT NULL,
   study status text NOT NULL,
   study_protocol_id uuid,
   study_protocol_version text,
   CONSTRAINT pk study id PRIMARY KEY (study id)
CREATE TABLE IF NOT EXISTS public."STUDY_TYPE"
   study_type_id integer NOT NULL,
   study type desc text NOT NULL,
   PRIMARY KEY (study type id)
CREATE TABLE IF NOT EXISTS public. "STUDY PHASE"
   study_phase_id integer NOT NULL,
   study phase desc text NOT NULL,
   CONSTRAINT pk_study_phase_id PRIMARY KEY (study_phase_id)
CREATE TABLE IF NOT EXISTS public."STUDY_IDENTIFIER"
   study identifier id uuid NOT NULL,
   org code text NOT NULL,
   study_identifier_type_id integer NOT NULL,
   study identifier name text.
   study id uuid,
   PRIMARY KEY (study_identifier_id)
```

JSON

```
"studyTitle": "Study Number One",
"studyType":"INTERVENTIONAL".
"studyPhase": "PHASE 1 TRIAL",
"studyStatus": "this is a study status",
"studvIdentifiers":[
      "id":"flaae4a0-2ddf-44cc-9f65-f3077f3f5939",
      "orgCode": "2.16.840.1.113883.3.1077",
      "name": "ClinicalTrials.gov",
      "idType":"REGISTRY STUDY"
      "id": "74bab1ed-9439-4467-83a3-284727e0b0e9",
      "orgCode": "2.16.840.1.113883.3.1077",
      "name":"ClinicalTrials.gov",
      "idTvpe": "SPONSOR ID"
"studyProtocolReferences": [
      "studyProtocolId": "a5709f39-dcf1-40a0-bd40-5164a96e07b8",
      "studyProtocolVersion":"1.0"
"studyVersion":"1.0",
"studyTag":null,
"studyId": "8bf37e48-cbf0-49f5-a113-4c5a15b2cd90",
"currentSections":[
      "id":"bd8e986a-d7cd-4289-bc14-f05e05e3342f",
      "sectionType": "STUDY_INDICATIONS",
      "studyIndications":[
            "id":"f192251c-a732-44b5-b63a-6f3b99bd7c99",
            "description": "Alzheimer's disease",
            "coding":[
                  "codeSystem": "SNOMED-CT",
                  "codeSystemVersion":"4.0.6.4".
                   "decode": "Alzheimer's disease (disorder)"
```





Application Programming Interface (API) Specification

The API definition (normative) in JSON and HTML forms

```
JSON
 GET /studydefinitionrepository/v1/studyhistory
                                                                                       "openapi": "3.0.0",
Get history of all studies (get.studydesignrepository.history)
                                                                                      "info": {
Get history of all studies
                                                                                        "title": "Simple API for DDF",
                                                                                        "description": "This is a sample API for the DDF project - including sectioning (Acc
Return type
                                                                                        "license": {
inline response 200 1
                                                                                          "name": "MIT",
Example data
                                                                                          "url": "https://opensource.org/licenses/MIT"
Content-Type: application/json
                                                                                        "version": "1.2.6"
   "study" : [ {
                                                                                      "servers": [
     "studyVersion" : [ 1, 1 ],
     "studyId" : "e3e84e94-927e-42da-9625-e4f18bc4b7a4",
     "studyTitle" : "Example study title"
                                                                                           "url": "https://virtserver.swaggerhub.com/CDISC1/DDF/1.2.6",
                                                                                          "description": "SwaggerHub API Auto Mocking"
     "studyVersion" : [ 1, 1 ],
     "studvId" : "e3e84e94-927e-42da-9625-e4f18bc4b7a4",
     "studyTitle" : "Example study title"
                                                                                      "paths": {
                                                                                        "/studydefinitionrepository/v1/{study}": {
                                                                                           "get": {
                                                                                             "tags": [
This API call produces the following media types according to the Accept request header; the media type will be conve
                                                                                               "default"
  · application/json
                                                                                             "summary": "Get study build sections",
Responses
                                                                                             "description": "Get Study Build Sections".
200
OK inline response 200 1
                                                           HTML
                                                                                             "operationId": "get.studydesignrepository.sections",
                                                                                             "parameters": [
                                                                                                 "name": "study",
This Set
                                                                                                 "in": "path",
                   Default
                                                                                                 "description": "Study Builder Study",
                                                                                                 "required": true,

    GET /studydefinitionrepository/vl/studyhistory

                                                                                                 "style": "simple",
                      • GET /studydefinitionrepository/v1/{study}/sectionhistory
                                                                                                 "explode": false.

    GET /studydefinitionrepository/v1/{study}

                                                                                                 "schema": {
                      • GET /studydefinitionrepository/v1/{study}/studydesign/{s
                                                                                                   "type": "string",
                      • GET /studydefinitionrepository/v1/{study}/studyprotocols
                                                                                                   "example": "ACME001"
                      • POST /studydefinitionrepository/v1

    POST /studydefinitionrepository/v1/{study}/studyprotocol
```

Ignore!



• POST /studydefinitionrepository/v1/components

- $\bullet \ \ \underline{\texttt{DELETE}} \ \ / \underline{\texttt{studydefinitionrepository/v1/(study)/studyassessmentgroup/(assessmentgroupId)}} \\$
- DELETE /studydefinitionrepository/v1/{study}/biomedicalconcepts/{biomedicalConceptId}}



CDISC Controlled Terminology

The controlled terminology (normative) developed for the project. Provided in an Excel format so as to be easily searched and filtered.

Row #	UML Class Name	UML Item Name	Role	NCIC- code	CT Item Preferred Name	Synonym(s)	Definition w	Has Value List
	STUDY	STLIDY	Entity	C15206	Clinical Study		A clinical study involves research using human volunteers (also called	N
							participants) that is intended to add to medical knowledge. There are	
							two main types of clinical studies: clinical trials (also called	
							interventional studies) and observational	
-	STUDY	study_title	Attribute	C49802	Study Title	Trial Title; Official Study	studies. [[http://ClinicalTrials.gov]](CDISC Glossary)	N
	51001	study_title	Attribute	C49802	Study Title	Title; Study Title	The sponsor-defined name of the clinical study.	N
	STUDY	study_version	Attribute	C93490	Study Protocol Version		A plan at a particular point in time for a formal investigation to assess	N
							the utility, impact, pharmacological, physiological, and/or	
							psychological effects of a particular treatment, procedure, drug, device,	
							biologic, food product, cosmetic, care plan, or subject characteristic.	
							(BRIDG)	
	STUDY	study_status	Attribute	CNEW	Protocol Status		A condition of the protocol at a point in time with respect to its state of	Y (CNEW Protocol Statu
							readiness for implementation.	Response)
	STUDY	study_protocol_version	Attribute	C93490	Study Protocol Version		A plan at a particular point in time for a formal investigation to assess	N
							the utility, impact, pharmacological, physiological, and/or	
							psychological effects of a particular treatment, procedure, drug, device,	
							biologic, food product, cosmetic, care plan, or subject characteristic.	
							(BRIDG)	
	STUDY_TYPE	STUDY_TYPE	Entity	C142175	Study Type	Study Type; Study Type	The nature of the investigation for which study information is being	N
						Classification	collected. (After clinicaltrials.gov)	
	STUDY_TYPE	study_type_desc	Attribute	C142175	Study Type Classification	Study Type; Study Type	The nature of the investigation for which study information is being	Y (C99077 STYPE)
						Classification	collected. (After clinicaltrials.gov)	
	STUDY_PHASE	STUDY_PHASE	Entity	C48281	Trial Phase	Trial Phase; Trial Phase	A step in the clinical research and development of a therapy from initial	N
						Classification	clinical trials to post-approval studies. NOTE: Clinical trials are	
							generally categorized into four (sometimes five) phases. A therapeutic	
							intervention may be evaluated in two or more phases simultaneously	
							in different trials, and some trials may overlap two different phases. [21	
							CFR section 312.21; After ICH Topic E8 NOTE FOR GUIDANCE ON	
							GENERAL CONSIDERATIONS FOR CLINICAL TRIALS,	
							CPMP/ICH/291/95 March 1998]	
	STUDY_PHASE	study_phase_desc	Attribute	C48281	Trial Phase Classification	Trial Phase; Trial Phase	A step in the clinical research and development of a therapy from initial	Y (C66737 TPHASE)
						Classification	clinical trials to post-approval studies. NOTE: Clinical trials are	
							generally categorized into four (sometimes five) phases. A therapeutic	
							intervention may be evaluated in two or more phases simultaneously	
							in different trials, and some trials may overlap two different phases. [21	
							CFR section 312.21; After ICH Topic E8 NOTE FOR GUIDANCE ON	
							GENERAL CONSIDERATIONS FOR CLINICAL TRIALS,	
							CPMP/ICH/291/95 March 1998]	
	ER	STUDY_IDENTIFIER	Entity	C83082	Study Identifier		A sequence of characters used to identify, name, or characterize the study.	N
	STUDY_IDENTIFI ER	org_code	Attribute	CNEW	Study Identifier Organization Code		A coded value specifying the organization that creates and/or assigns the study identifier.	N
	OTUDY IDENTIFI	ata da a de a de a como	A 11-75	NEW	Study Identifier Name		The literal identifier (i.e., distinctive designation) of the sequence	

PDF

User Stories

Dave Iberson-Hurst, 21st March 2022

Changes

- 25th January 2022 Initial draft
- 31st January 2022 Updates after informal review
- 14th Febraury 2022 Updates after initial Transcelerate (TCB) review. Includes better
 alignment with TCB terminology. Also the Essential User Stories and those raised as JIRA
 tickets have been incorporated such they can viewed in context.
- 21st March 2022 Updates after further review.

Purpose

This note presents a set of user stories for the Digital Data Flow Project based on the essential user stories produced by the project to date. The presented user stories try and respond to comments raised on the essential user stories such as the following JIRA ticket.

However the users of the USDM are the upstream and downstream systems and not directly the users of those systems. So search and add/remove functions like described in user story L1 to L5 are not directly applicable to the USDM and RA. However, the data structure must make it possible for the upstream system to provide this functionality. So a logical data structure and API requests are in scope. Can the user stories be adjusted to reflect this?





The architectural principles developed by the project. PDF Document

PDF

Architecture Principles

Description of the Deliverable for the Development Phase

The architecture principles aim to help implementers understand how to create conformant solution architectures through the implementation of the DDF Study Definition Reference Architecture (RA). They inform solution architects of the approach expected by the RA stakeholders to ensure consistency across Study Definition implementations and to ensure alignment with the business and technology objectives. Architecture principles define the fundamental assumptions regarding the RA and aid in developing a framework for decision making by solution architects implementing the RA.

Summary of work to be performed during scoping

A framework for the architecture principles was developed during the scoping period.





Supporting Materials

A set of informational materials in PDF format to help understand the deliverables being reviewed. PDF documents or references.

- Issues and Questions: Based on the remaining JIRA tickets a series of issues and question to be addressed during the review.
- Technical Notes: Technical notes on Schedule of Activities and ODM/CRF creation
- High-Level Model Overview: Aid to reviewing the model
- **UML Notes:** Help for those reading the UML diagrams

SCREENING R
VISIT |

CRF Specification for DDR

DDR-Umbrella Study of DNA-Damage Response Targeting Agents in Advanced Biliary Tract Cancer

Protocol Name: Targeting Agents in ABTC

CRF Creation date: 2022-03-15T15:46:39

Table of Contents

12-lead ECG

Chemistry (predose)

Disease characteristics

Eligibility criteria

Ensure availability of medication X

Form DM - Demographics

Form LB - Local Processing

Height

Hematology (predose)

		•	ISO8601 in SDTM.	the state of the s	Hospitalization												
AGE	1.2	What is the subject's age?			Trospitalization						1						
AGEU	1.3	What is the age unit used?			1												
SEX	1.4	What is the sex of the subject?	Female #7 Male Aug Unknown (U Undflereniated (UND#FERENTATED)		Informed consent										J		
ETHN	c 1.5	Do you consider yourself Hispanic/Latino or not Hispanic/Latino?				X		x		i 	x		x	i †	X	<u> </u>	
RACE	1.6	Which of the following five racial designations best describes you? (More than one choice is acceptable.)	Asian (ASIAN) Black or African Ar Native Hawaiian o White (WHITE)	r Alaska Native (AMERICAN INDIAN OR ALASKA NATIVE) merican (BLACK OR AFRICAN AMERICAN) Ir Other Pacific Islander (NATIVE HAMAMAN OR OTHER PACIFIC ISLANDER)		X 		х		i 	x		x				
			O Not Reported (NOT Unknown (UNKNOW Other (OTHER)			ļ 	<u>i</u>	x		i 	X X	i	×	i	i x		
RACE	<i>отн</i> 1.7	What was the other race?			}	X	i	x	x	; x	x	; x	, x	, x	X		



Form DM - Demographics

CRF instructions: DM - Demographics

CDISC Study Definition Repository RA Deliverables



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The UML class diagram (normative) as well as SQL Data Dictionary, Entity Relationship Diagram and example JSON output (informative)



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Essential Users Stories

The User Stories. PDF document



Architecture Principles

The architectural principles developed by the project. PDF Document



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Walkthrough

Informational

Note

- The following diagrams are for information only
- The diagrams may contain errors, the UML is the normative artefact
- Many to many tables not shown to aid understanding

Recommend

 Walk through the model and use the Excel CT file at the same time



Supporting Materials -	Supporting Materials - A set of informational materials in PDF format to help understand the deliverables being reviewed.									
Specific Public Review Topics	No	Based on the remaining JIRA tickets a series of issue questions the CDISC team would like input from public reviewers		2022 03 29 JIRA Public Review.pdf						
High-Level Model Overview	No	Aid to reviewing the model		2022 03 29b Model Walkthrough.pdf						
Technical Notes	No	Technical notes on Schedule of Activities and ODM/CRF creation	PDF Document	2022 03 25 SoA and CRF Tech Note.pdf						
UML Notes	No	Help for those reading the UML diagrams	Links	BRIDG Users Guide https://en.wikipedia.org/wiki/Class_diagram http://www.acijemodeling.com/artifacts/classDiagram.htm						
			https://wiki.cdis	sc.org/display/PUB/DDF+Public+Review+Dashboard						



Public Review - JIRA Issues

Dave Iberson-Hurst, 29th March 2022

Changes

- 9th March 2022 Initial draft.
- 15th March 2022 Updated with addition of DDF-228, DDF-219, DDF-197, DDF-196 and DDF-185
- 17th March 2022 Updated with addition of DDF-224, DDF-198, DDF-186, DDF-185, DDF-133, DDF-102
- 21st March 2022 Add in DDF-226 and DDF-227
- 23rd March 2022 Add in DDF-106 and DDF-114. Restructure the Topic Areas section to facilitate what needs to be undertaken for public review and the questions that are to be posed to reviewers.
- 24th March 2022 Add in DDF-103
- 28th March 2022 Add in DDF-221 and DDF-225
- 29th March 2022 Add in review questions and fix an incorrect reference.

Purpose

This note assembles all the DDF JIRA tickets that have not been processed prior to the first CDISC public review of the USDM. The note provides an overview of the tickets, groups the tickets into topic area and provides a detailed export for each of the tickets.

Those participating in the public review are requested to note the questions in red text in the Topic Areas section below.



Model Walkthrough Technical Note

CDISC DDF Team, 29th March 2022, third draft

Changes

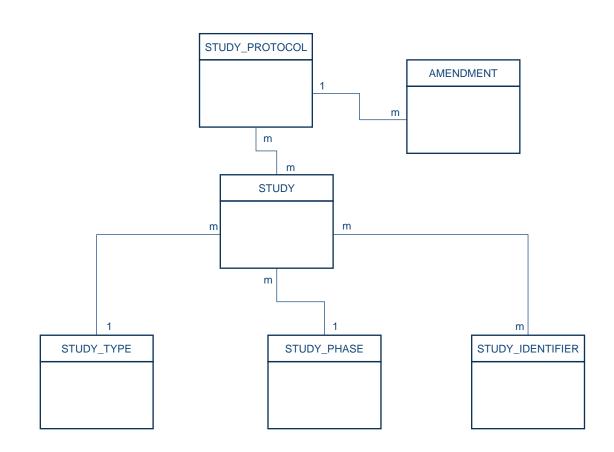
- 28th Match 2022 First draft
- 29th March 2022 Second draft after an initial review
- 29th March 2022 Third draft after further comments received

Purpose

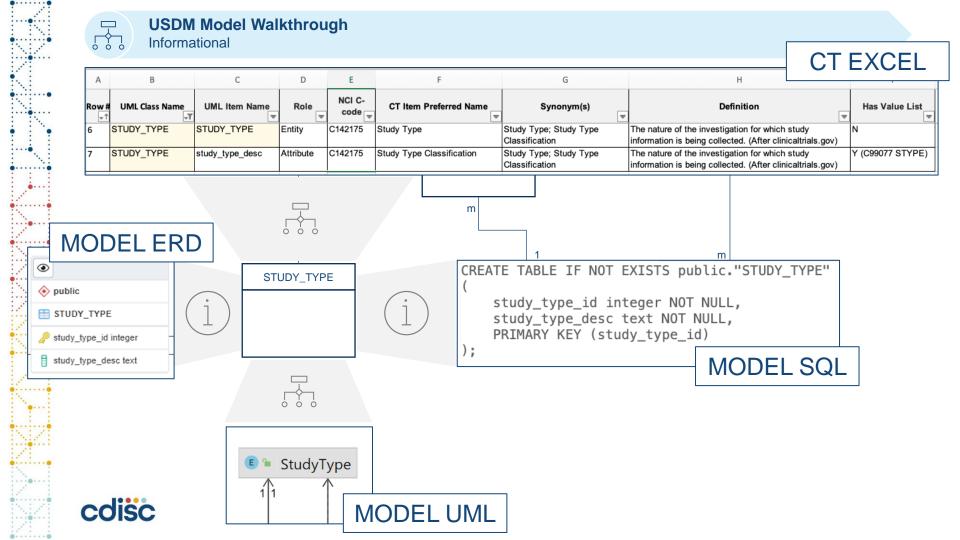
This note provides an overview and walkthrough of the CDISC and TransCelerate Digital Data Flow (DDF) Unified Study Definitions Model (USDM). The aim is to guide the non-technical reader when reviewing the model.

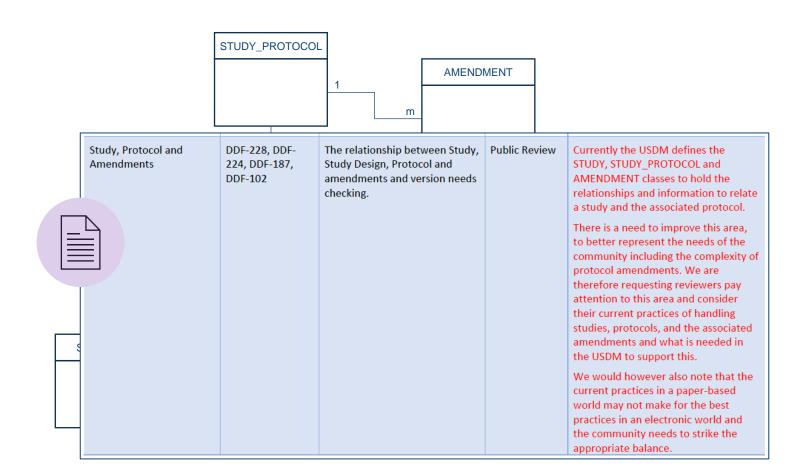
Note: this an early draft of this note and it will be updated as comments are received, and review of the model takes place.



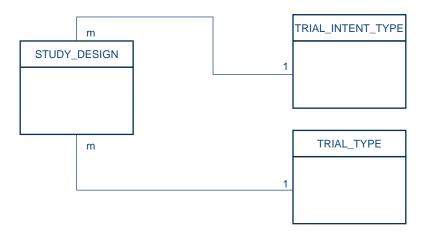








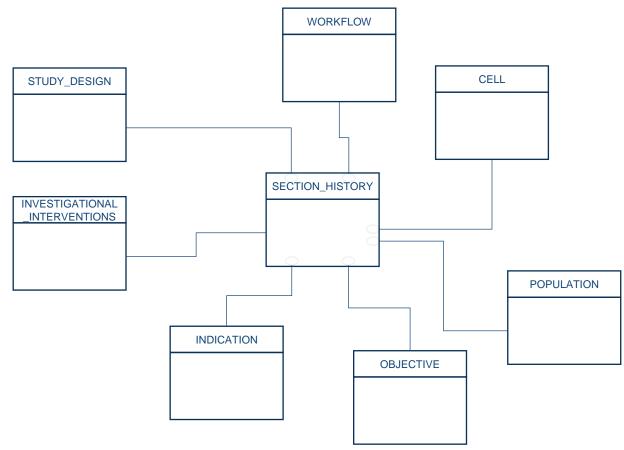
Row# _{+↑}	UML Class Name	UML Item Name	Role	NCI C- code	CT Item Preferred Name	Synonym(s)	Definition	Has Value List <u></u> ▼
99	TRIAL_INTENT_TYPE	TRIAL_INTENT_TYPE	Entity	C49652	Trial Intent Type	Trial Intent Type	The planned purpose of the	N
					<u> </u>		therapy, device, or agent under	
100	TRIAL_INTENT_TYPE	trial_intent_type	Attribute	C49652	Trial Intent Type	Trial Intent Type	The planned purpose of the	Y (C66736 TINDTP)
							therapy, device, or agent under	
101	TRIAL_TYPE	TRIAL_TYPE	Entity	C49660	Trial Type	Trial Scope; Trial Type	The nature of the interventional	N
							study for which information is	
102	TRIAL_TYPE	trial_type	Attribute	C49660	Trial Type	Trial Scope; Trial Type	The nature of the interventional	Y (C66739 TTYPE)
							study for which information is	

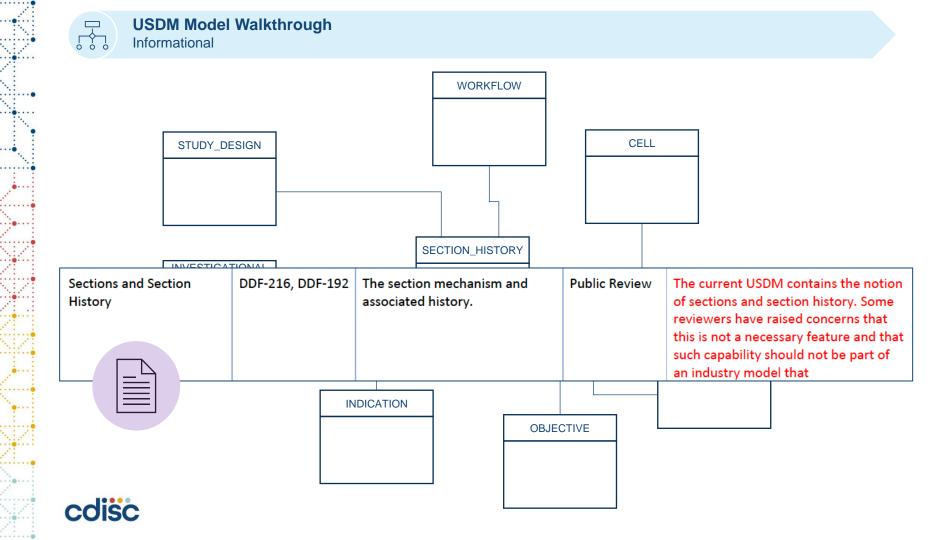


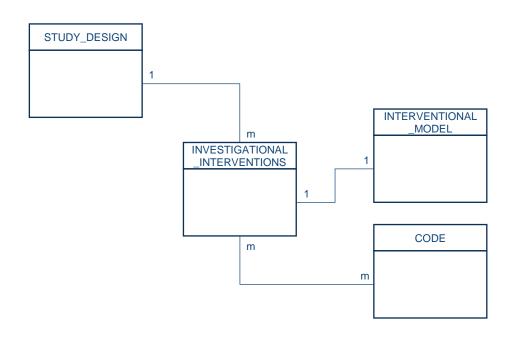




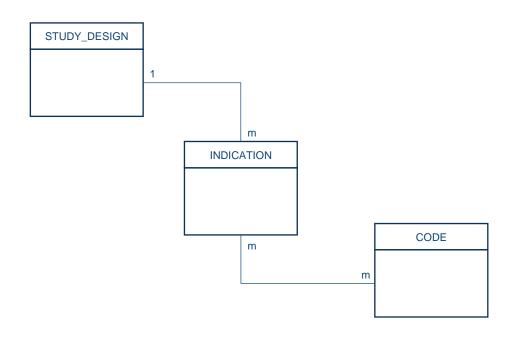
cdisc







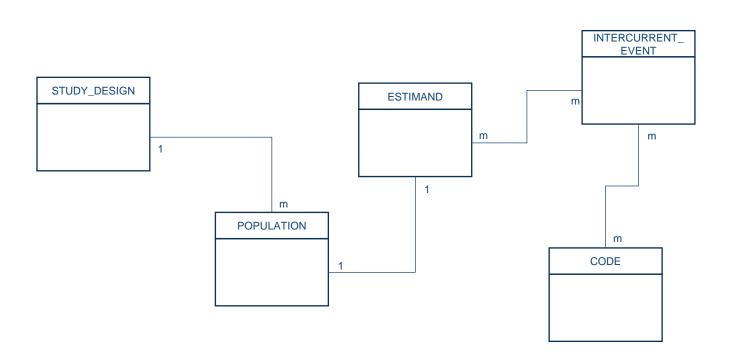






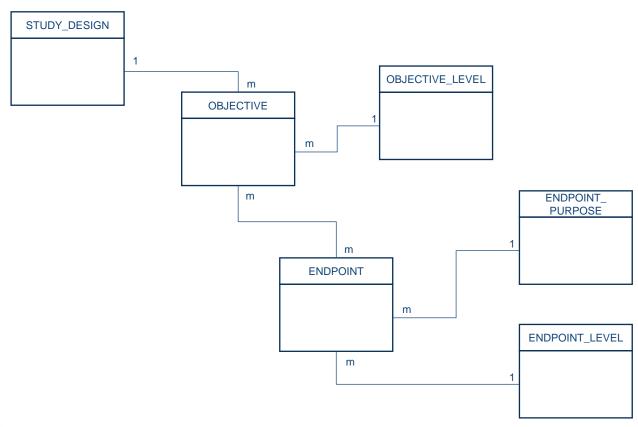
External CT	DDF-227, DDF- 103, DDF-200, DDF-93	Tickets relating to the use of external CT and how CT is referenced. Once particular example is procedure types and using external CT.	Public Review	Within the USDM there are places where the CODE class can be used to refer to external (to the USDM) terminology. The project has already received comments about expanding the ability to refer to external terminology for such items as interventions and procedures. As part of this review, it would be useful to know what the CT the community is using for such items with their current protocols or what may be useful as the community moves from a paper paradigm to an electronic one.
		m m	CODE	



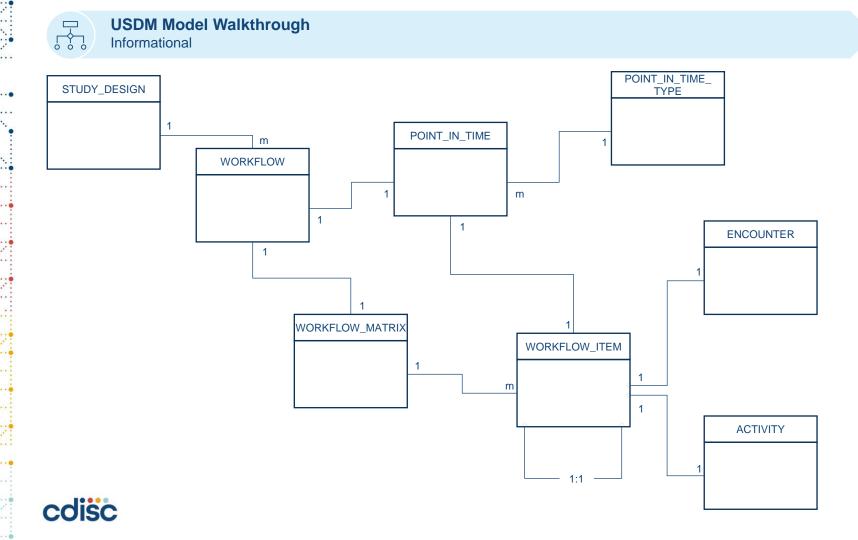


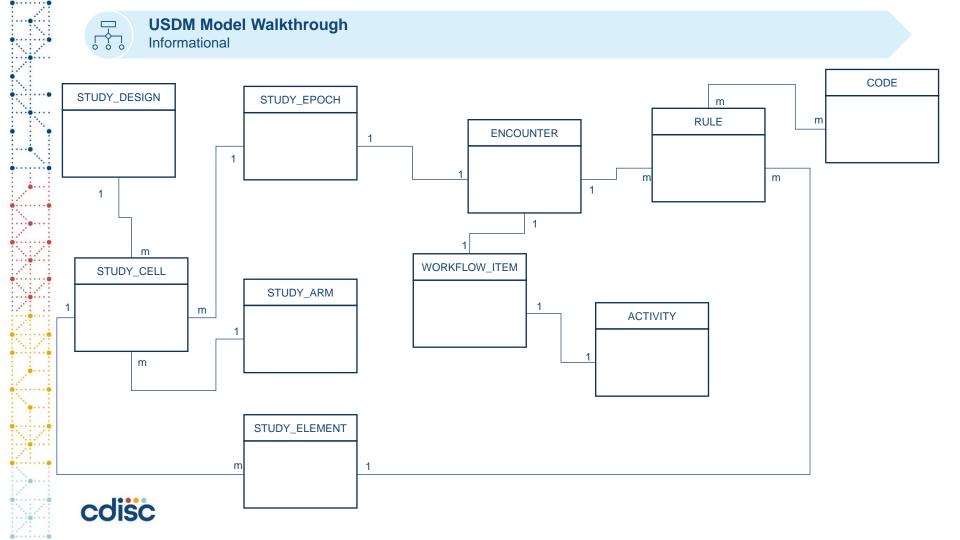


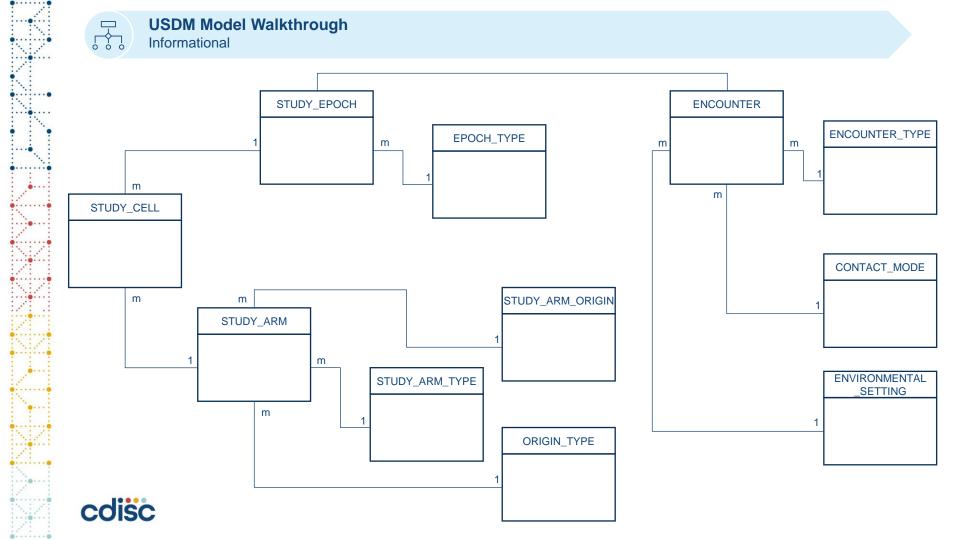


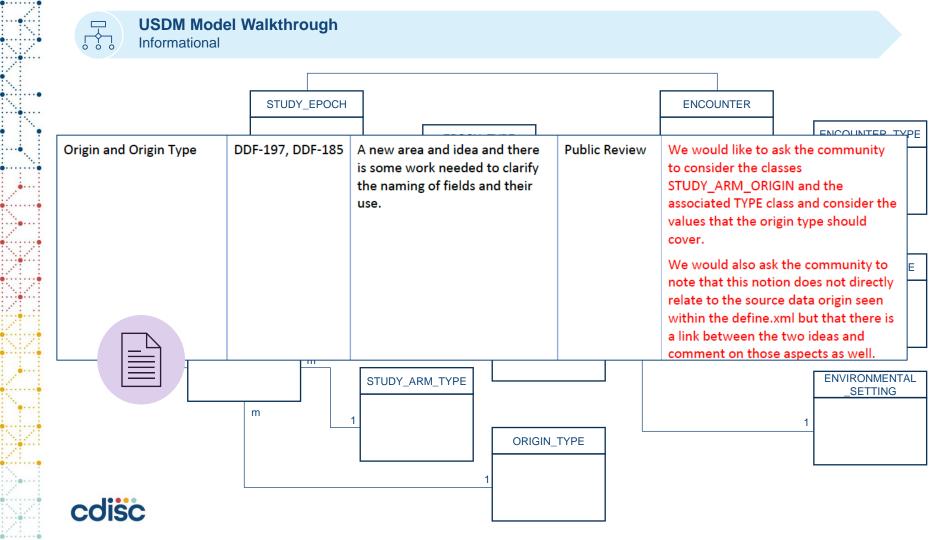


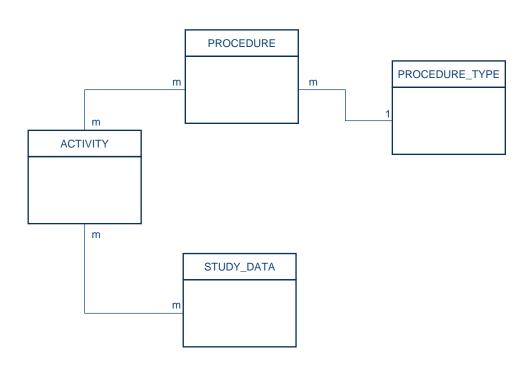




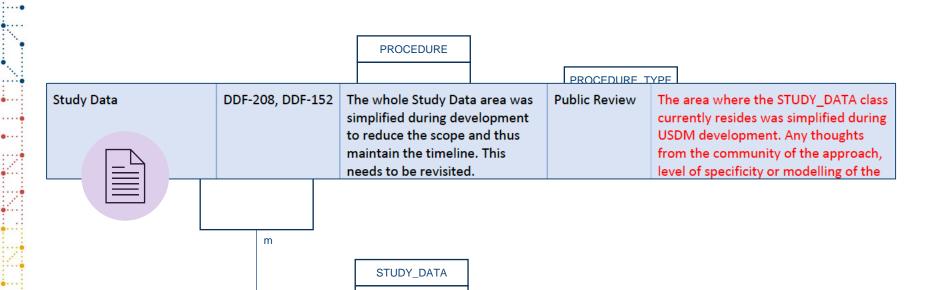








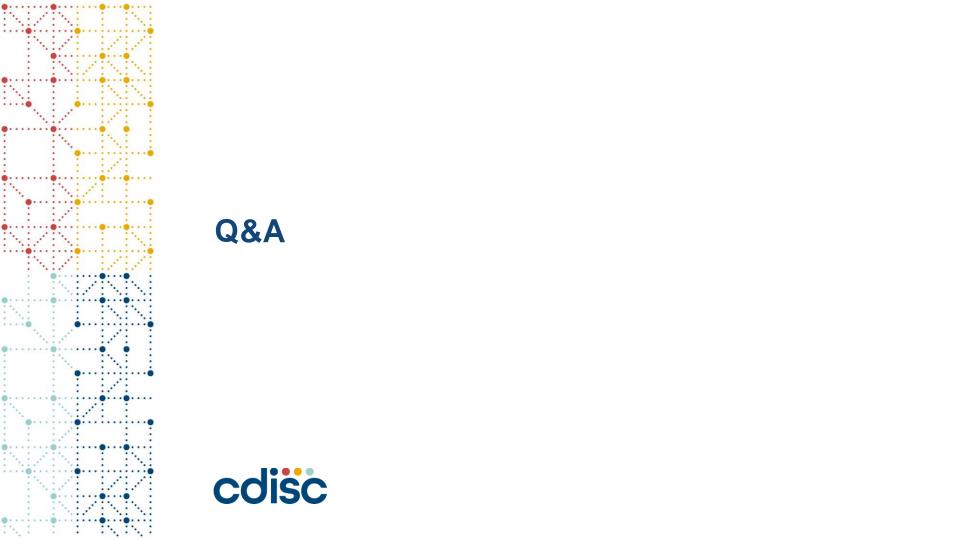






Thank You cdisc







Additional Volunteer Opportunities

To help us manage and communicate opportunities dynamically, we would like to learn more about you!

- What aspects of this project are you interested in?
- Approximately, how much time are you able to commit to this project per week?
- Do you have experience and skill sets specific or related to project deliverables?
- CDISC Volunteer Opportunities Digital Data Flow (DDF) Team Wiki

For new volunteers, can you please provide answers above via email to John Owen (jowen@cdisc.org)?

• All volunteers are invited to reach out as interests, time commitment, and/or skill sets change!



Additional Volunteer Opportunities

- DDF is dynamic agile project with tight timelines.
- Given this, additional volunteer opportunities are currently TBD and will be defined as the project progresses.
- Please note, post-MVP release there may also be opportunities to volunteer.
 - More information will be provided 2022

