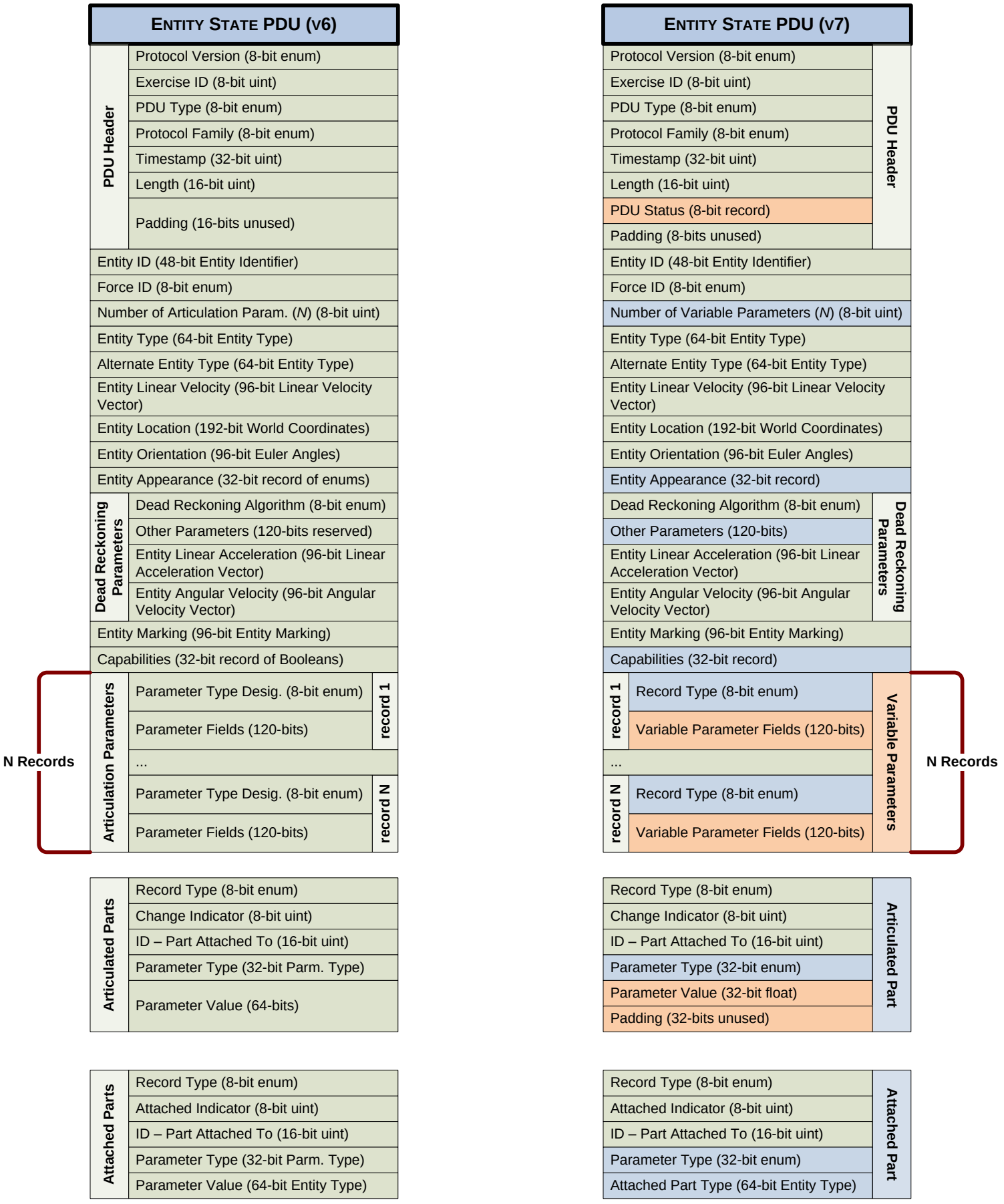
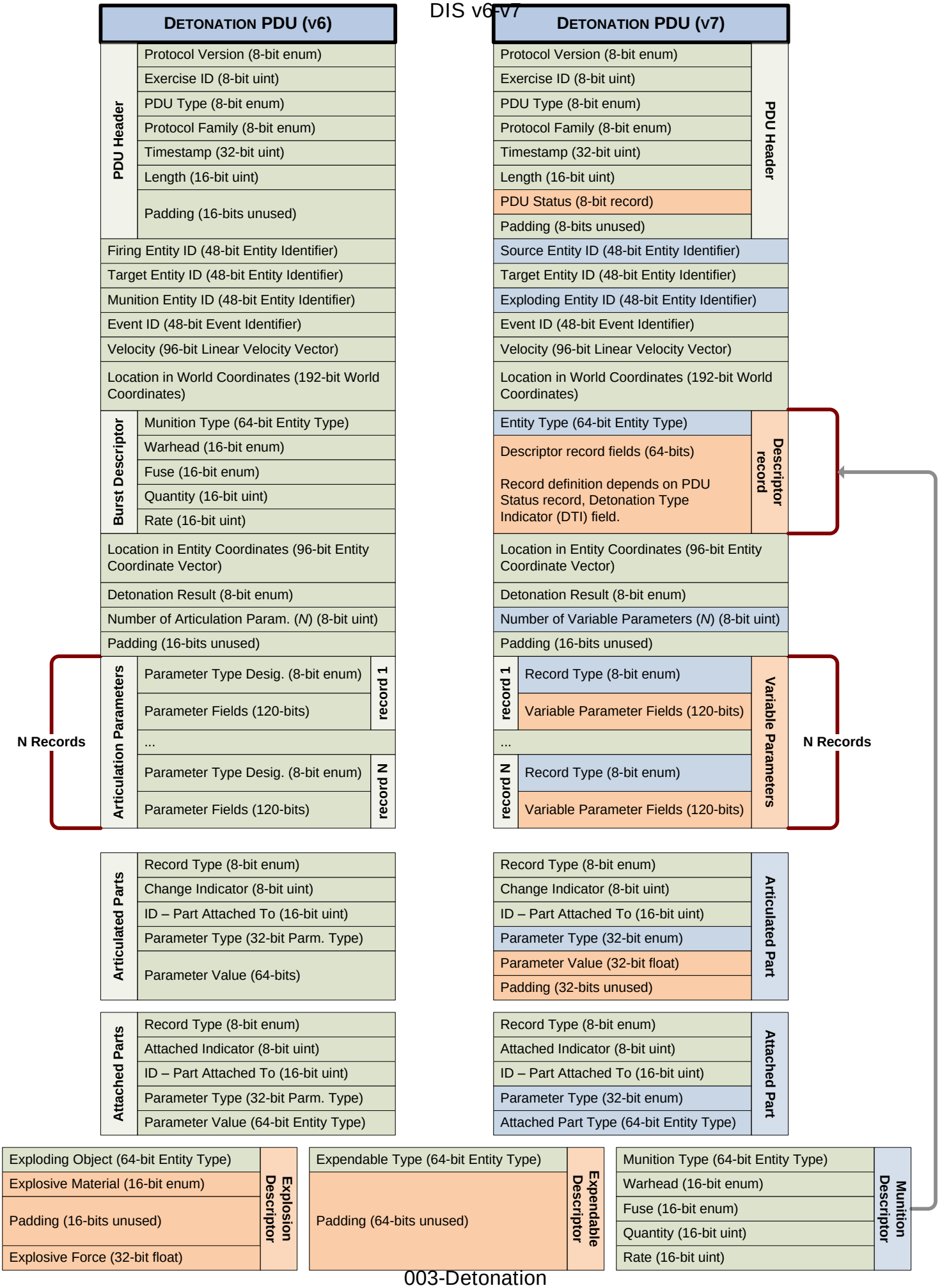

ENTITY STATE PDU (v6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Entity ID (48-bit Entity Identifier)
Force ID (8-bit enum)
Number of Articulation Param. (N) (8-bit uint)
Entity Type (64-bit Entity Type)
Alternate Entity Type (64-bit Entity Type)
Entity Linear Velocity (96-bit Linear Velocity Vector)
Entity Location (192-bit World Coordinates)
Entity Orientation (96-bit Euler Angles)
Entity Appearance (32-bit record of enums)
Dead Reckoning Parameters
Dead Reckoning Algorithm (8-bit enum)
Other Parameters (120-bits reserved)
Entity Linear Acceleration (96-bit Linear Acceleration Vector)
Entity Angular Velocity (96-bit Angular Velocity Vector)
Entity Marking (96-bit Entity Marking)
Capabilities (32-bit record of Booleans)
N Records
Articulation Parameters
Parameter Type Desig. (8-bit enum)
record 1
Parameter Fields (120-bits)
...
Parameter Type Desig. (8-bit enum)
record N
Parameter Fields (120-bits)
Articulated Parts
Record Type (8-bit enum)
Change Indicator (8-bit uint)
ID – Part Attached To (16-bit uint)
Parameter Type (32-bit Parm. Type)
Parameter Value (64-bits)
Attached Parts
Record Type (8-bit enum)
Attached Indicator (8-bit uint)
ID – Part Attached To (16-bit uint)
Parameter Type (32-bit Parm. Type)
Parameter Value (64-bit Entity Type)
ENTITY STATE PDU (v7)
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
PDU Header
Entity ID (48-bit Entity Identifier)
Force ID (8-bit enum)
Number of Variable Parameters (N) (8-bit uint)
Entity Type (64-bit Entity Type)
Alternate Entity Type (64-bit Entity Type)
Entity Linear Velocity (96-bit Linear Velocity Vector)
Entity Location (192-bit World Coordinates)
Entity Orientation (96-bit Euler Angles)
Entity Appearance (32-bit record)
Dead Reckoning Algorithm (8-bit enum)
Other Parameters (120-bits)
Entity Linear Acceleration (96-bit Linear Acceleration Vector)
Entity Angular Velocity (96-bit Angular Velocity Vector)
Dead Reckoning Parameters
Entity Marking (96-bit Entity Marking)
Capabilities (32-bit record)
record 1
Record Type (8-bit enum)
Variable Parameter Fields (120-bits)
...
record N
Record Type (8-bit enum)
Variable Parameter Fields (120-bits)
Variable Parameters
N Records
Record Type (8-bit enum)
Change Indicator (8-bit uint)
ID – Part Attached To (16-bit uint)
Parameter Type (32-bit enum)
Parameter Value (32-bit float)
Padding (32-bits unused)
Articulated Part
Record Type (8-bit enum)
Attached Indicator (8-bit uint)
ID – Part Attached To (16-bit uint)
Parameter Type (32-bit enum)
Attached Part Type (64-bit Entity Type)
Attached Part

FIRE PDU (V6)	
PDU Header	Protocol Version (8-bit enum)
	Exercise ID (8-bit uint)
	PDU Type (8-bit enum)
	Protocol Family (8-bit enum)
	Timestamp (32-bit uint)
	Length (16-bit uint)
	Padding (16-bits unused)
Firing Entity ID (48-bit Entity Identifier)	
Target Entity ID (48-bit Entity Identifier)	
Munition Entity ID (48-bit Entity Identifier)	
Event ID (48-bit Event Identifier)	
Fire Mission Index (32-bit uint)	
Location in World Coordinates (192-bit World Coordinates)	
Burst Descriptor	Munition Type (64-bit Entity Type)
	Warhead (16-bit enum)
	Fuse (16-bit enum)
	Quantity (16-bit uint)
	Rate (16-bit uint)
Velocity (96-bit Linear Velocity Vector)	
Range (32-bit float)	

FIRE PDU (V7)	
Protocol Version (8-bit enum)	PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (8-bits unused)	
Firing Entity ID (48-bit Entity Identifier)	
Target Entity ID (48-bit Entity Identifier)	
Munition/Expendable Entity ID (48-bit Entity Identifier)	
Event ID (48-bit Event Identifier)	
Fire Mission Index (32-bit uint)	
Location in World Coordinates (192-bit World Coordinates)	
Entity Type (64-bit Entity Type)	Descriptor record
Descriptor record fields (64-bits) Record definition depends on PDU Status record, Fire Type Indicator (FTI) field.	
Velocity (96-bit Linear Velocity Vector)	
Range (32-bit float)	

Munition Type (64-bit Entity Type)	Munition Descriptor
Warhead (16-bit enum)	
Fuse (16-bit enum)	
Quantity (16-bit uint)	
Rate (16-bit uint)	

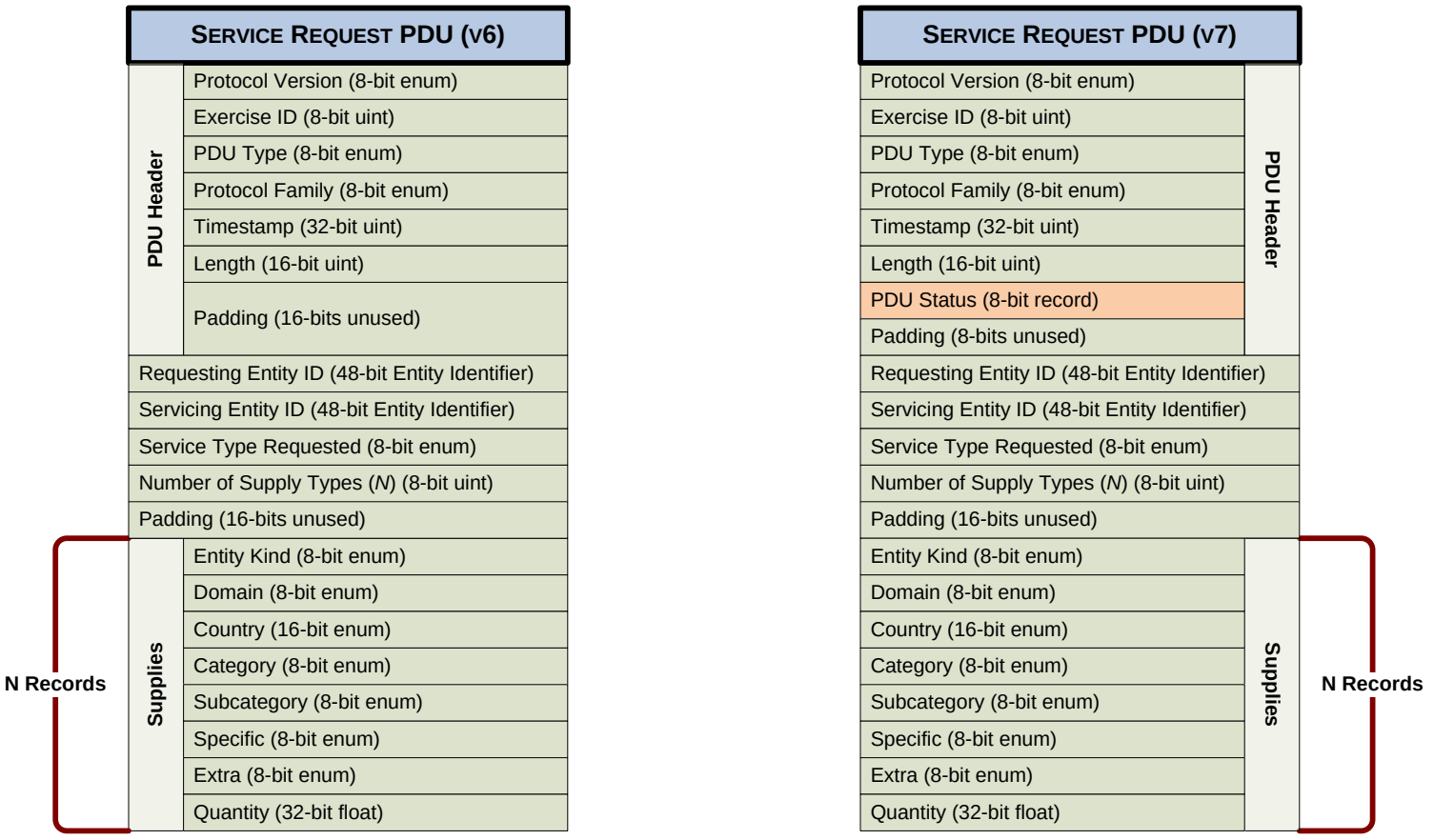
Expendable Type (64-bit Entity Type)	Expendable Descriptor
Padding (64-bits unused)	

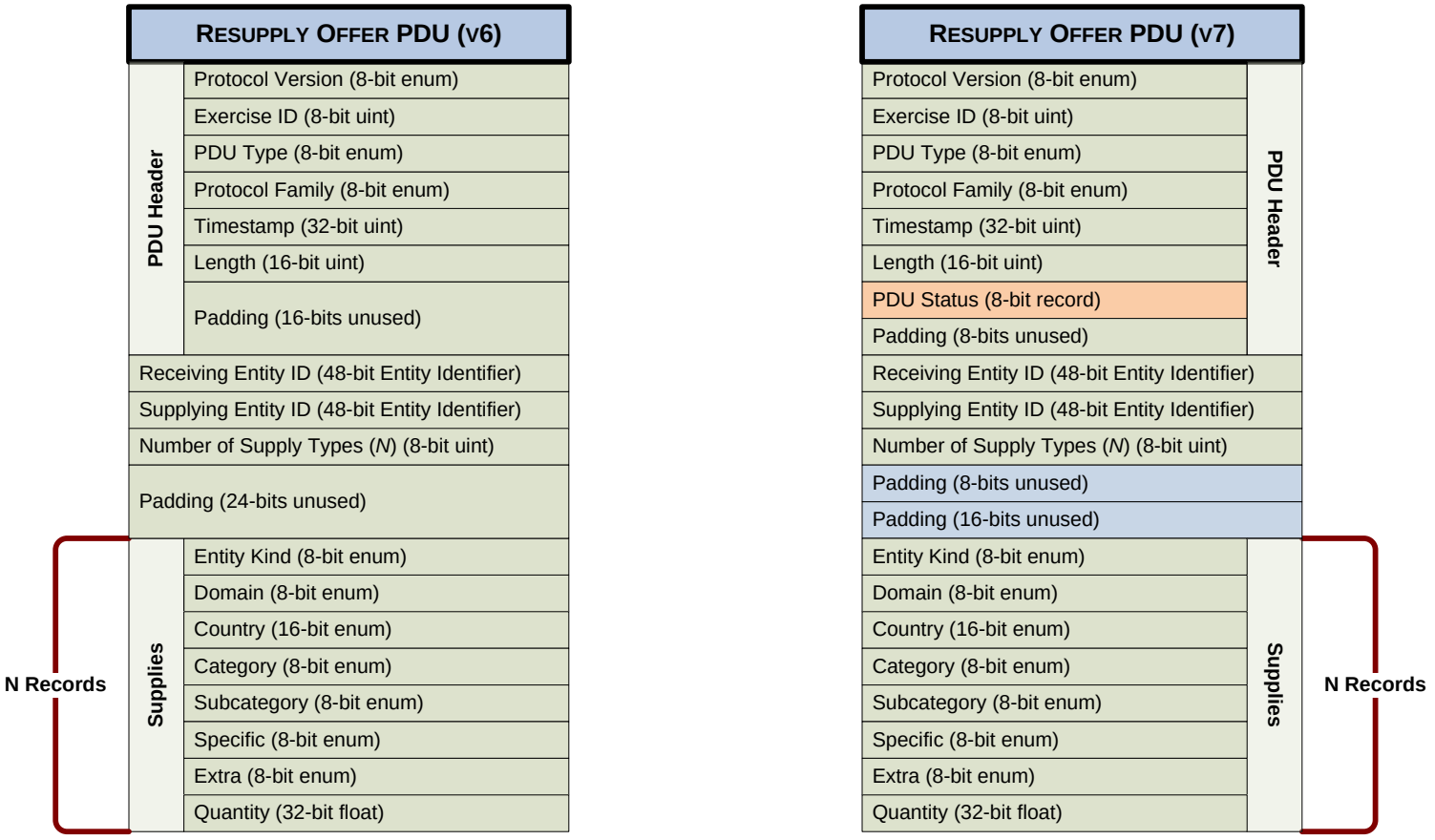

DETONATION PDU (v6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Firing Entity ID (48-bit Entity Identifier)
Target Entity ID (48-bit Entity Identifier)
Munition Entity ID (48-bit Entity Identifier)
Event ID (48-bit Event Identifier)
Velocity (96-bit Linear Velocity Vector)
Location in World Coordinates (192-bit World Coordinates)
Burst Descriptor
Munition Type (64-bit Entity Type)
Warhead (16-bit enum)
Fuse (16-bit enum)
Quantity (16-bit uint)
Rate (16-bit uint)
Location in Entity Coordinates (96-bit Entity Coordinate Vector)
Detonation Result (8-bit enum)
Number of Articulation Param. (N) (8-bit uint)
Padding (16-bits unused)
Articulation Parameters
Parameter Type Desig. (8-bit enum)
record 1
Parameter Fields (120-bits)
...
Parameter Type Desig. (8-bit enum)
record N
Parameter Fields (120-bits)
N Records
DETONATION PDU (v7)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Source Entity ID (48-bit Entity Identifier)
Target Entity ID (48-bit Entity Identifier)
Exploding Entity ID (48-bit Entity Identifier)
Event ID (48-bit Event Identifier)
Velocity (96-bit Linear Velocity Vector)
Location in World Coordinates (192-bit World Coordinates)
Entity Type (64-bit Entity Type)
Descriptor record
Descriptor record fields (64-bits)
Record definition depends on PDU Status record, Detonation Type Indicator (DTI) field.
Location in Entity Coordinates (96-bit Entity Coordinate Vector)
Detonation Result (8-bit enum)
Number of Variable Parameters (N) (8-bit uint)
Padding (16-bits unused)
Variable Parameters
record 1
Record Type (8-bit enum)
Variable Parameter Fields (120-bits)
...
record N
Record Type (8-bit enum)
Variable Parameter Fields (120-bits)
N Records
Articulated Parts
Record Type (8-bit enum)
Change Indicator (8-bit uint)
ID – Part Attached To (16-bit uint)
Parameter Type (32-bit Parm. Type)
Parameter Value (64-bits)
Articulated Part
Record Type (8-bit enum)
Change Indicator (8-bit uint)
ID – Part Attached To (16-bit uint)
Parameter Type (32-bit enum)
Parameter Value (32-bit float)
Padding (32-bits unused)
Attached Parts
Record Type (8-bit enum)
Attached Indicator (8-bit uint)
ID – Part Attached To (16-bit uint)
Parameter Type (32-bit Parm. Type)
Parameter Value (64-bit Entity Type)
Attached Part
Record Type (8-bit enum)
Attached Indicator (8-bit uint)
ID – Part Attached To (16-bit uint)
Parameter Type (32-bit enum)
Attached Part Type (64-bit Entity Type)
Exploding Object (64-bit Entity Type)
Explosive Material (16-bit enum)
Padding (16-bits unused)
Explosive Force (32-bit float)
Explosion Descriptor
Expendable Type (64-bit Entity Type)
Padding (64-bits unused)
Expendable Descriptor
Munition Type (64-bit Entity Type)
Warhead (16-bit enum)
Fuse (16-bit enum)
Quantity (16-bit uint)
Rate (16-bit uint)
Munition Descriptor

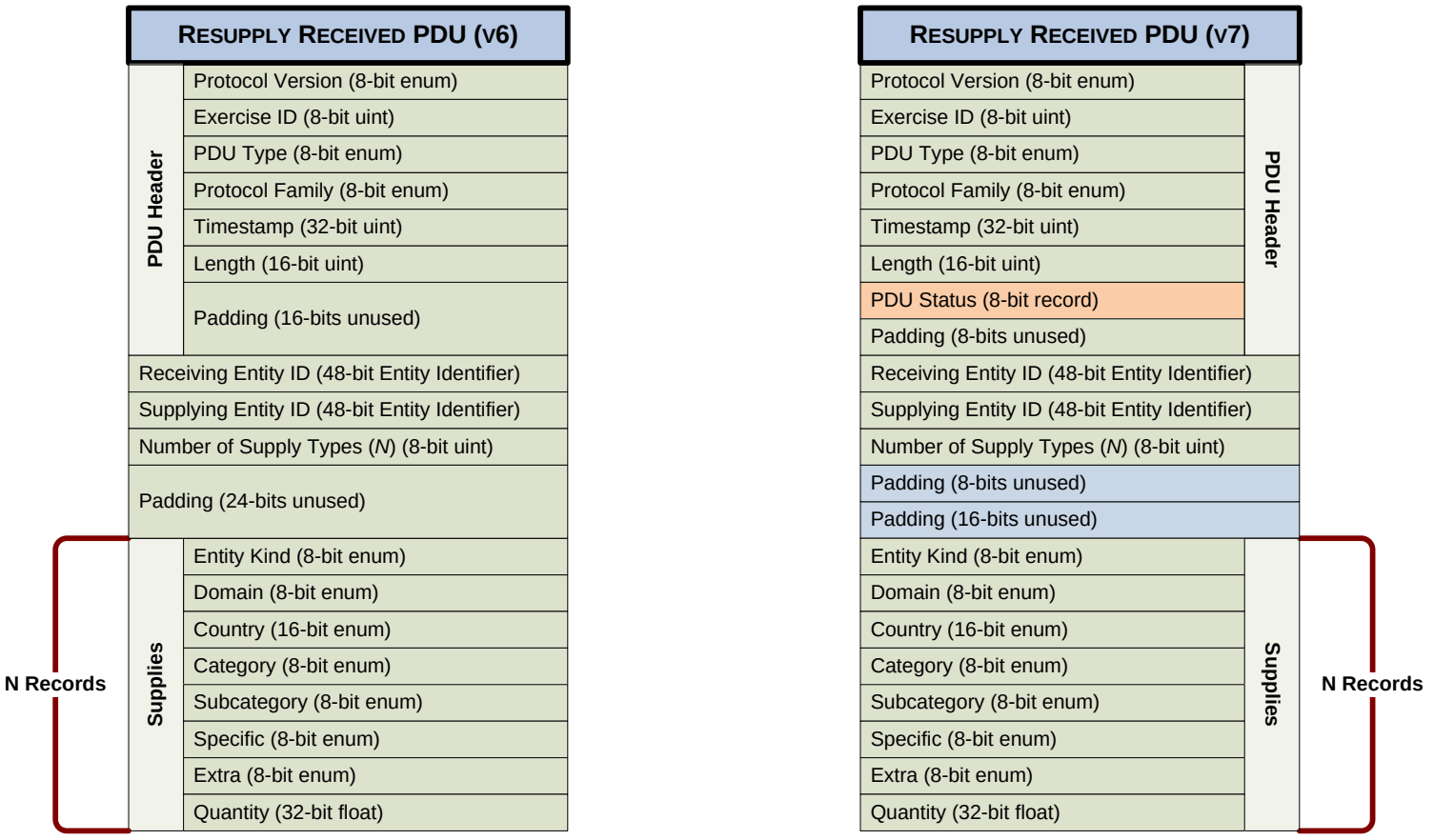
COLLISION PDU (V6)	
PDU Header	Protocol Version (8-bit enum)
	Exercise ID (8-bit uint)
	PDU Type (8-bit enum)
	Protocol Family (8-bit enum)
	Timestamp (32-bit uint)
	Length (16-bit uint)
	Padding (16-bits unused)
Issuing Entity ID (48-bit Entity Identifier)	
Colliding Entity ID (48-bit Entity Identifier)	
Event ID (48-bit Event Identifier)	
Collision Type (8-bit record of enums)	
Padding (8-bits unused)	
Velocity (96-bit Linear Velocity Vector)	
Mass (32-bit float)	
Location (with respect to entity) (96-bit Entity Coordinate Vector)	

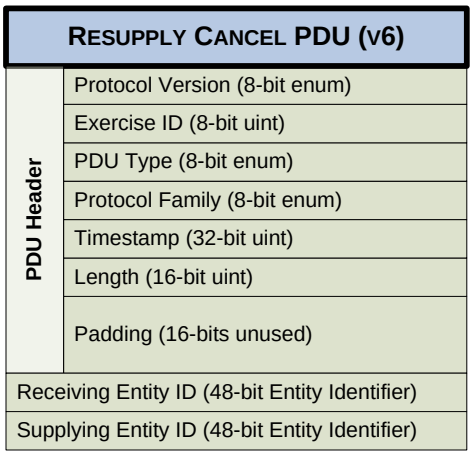
COLLISION PDU (V7)	
Protocol Version (8-bit enum)	PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (8-bits unused)	
Issuing Entity ID (48-bit Entity Identifier)	
Colliding Entity ID (48-bit Entity Identifier)	
Event ID (48-bit Event Identifier)	
Collision Type (8-bit record)	
Padding (8-bits unused)	
Velocity (96-bit Linear Velocity Vector)	
Mass (32-bit float)	
Location (with respect to entity) (96-bit Entity Coordinate Vector)	

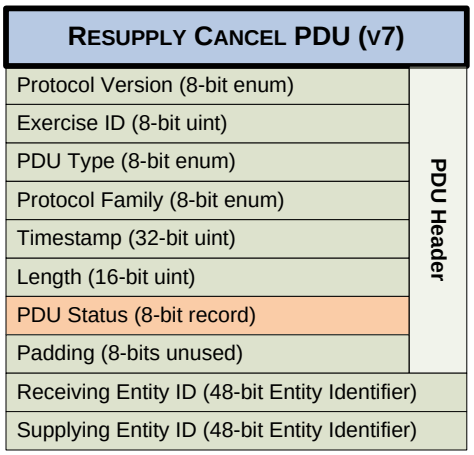
COLLISION PDU (V-DIS)	
Protocol Version (8-bit enum)	PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (8-bits unused)	
Issuing Entity ID (48-bit Entity Identifier)	
Colliding Entity ID (48-bit Entity Identifier)	
Event ID (48-bit Event Identifier)	
Collision Type (8-bit enum)	
Collision Origin (8-bit enum)	
Velocity (96-bit Linear Velocity Vector)	
Mass (32-bit float)	
Location (with respect to entity) (96-bit Entity Coordinate Vector)	


SERVICE REQUEST PDU (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Requesting Entity ID (48-bit Entity Identifier)
Servicing Entity ID (48-bit Entity Identifier)
Service Type Requested (8-bit enum)
Number of Supply Types (N) (8-bit uint)
Padding (16-bits unused)
Supplies
Entity Kind (8-bit enum)
Domain (8-bit enum)
Country (16-bit enum)
Category (8-bit enum)
Subcategory (8-bit enum)
Specific (8-bit enum)
Extra (8-bit enum)
Quantity (32-bit float)
N Records
SERVICE REQUEST PDU (V7)
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
PDU Header
Requesting Entity ID (48-bit Entity Identifier)
Servicing Entity ID (48-bit Entity Identifier)
Service Type Requested (8-bit enum)
Number of Supply Types (N) (8-bit uint)
Padding (16-bits unused)
Entity Kind (8-bit enum)
Domain (8-bit enum)
Country (16-bit enum)
Category (8-bit enum)
Subcategory (8-bit enum)
Specific (8-bit enum)
Extra (8-bit enum)
Quantity (32-bit float)
Supplies
N Records


RESUPPLY OFFER PDU (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Receiving Entity ID (48-bit Entity Identifier)
Supplying Entity ID (48-bit Entity Identifier)
Number of Supply Types (N) (8-bit uint)
Padding (24-bits unused)
Supplies
Entity Kind (8-bit enum)
Domain (8-bit enum)
Country (16-bit enum)
Category (8-bit enum)
Subcategory (8-bit enum)
Specific (8-bit enum)
Extra (8-bit enum)
Quantity (32-bit float)
N Records
RESUPPLY OFFER PDU (V7)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Receiving Entity ID (48-bit Entity Identifier)
Supplying Entity ID (48-bit Entity Identifier)
Number of Supply Types (N) (8-bit uint)
Padding (8-bits unused)
Padding (16-bits unused)
Supplies
Entity Kind (8-bit enum)
Domain (8-bit enum)
Country (16-bit enum)
Category (8-bit enum)
Subcategory (8-bit enum)
Specific (8-bit enum)
Extra (8-bit enum)
Quantity (32-bit float)
N Records


RESUPPLY RECEIVED PDU (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Receiving Entity ID (48-bit Entity Identifier)
Supplying Entity ID (48-bit Entity Identifier)
Number of Supply Types (N) (8-bit uint)
Padding (24-bits unused)
N Records
Supplies
Entity Kind (8-bit enum)
Domain (8-bit enum)
Country (16-bit enum)
Category (8-bit enum)
Subcategory (8-bit enum)
Specific (8-bit enum)
Extra (8-bit enum)
Quantity (32-bit float)
RESUPPLY RECEIVED PDU (V7)
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
PDU Header
Receiving Entity ID (48-bit Entity Identifier)
Supplying Entity ID (48-bit Entity Identifier)
Number of Supply Types (N) (8-bit uint)
Padding (8-bits unused)
Padding (16-bits unused)
Entity Kind (8-bit enum)
Domain (8-bit enum)
Country (16-bit enum)
Category (8-bit enum)
Subcategory (8-bit enum)
Specific (8-bit enum)
Extra (8-bit enum)
Quantity (32-bit float)
Supplies
N Records


RESUPPLY CANCEL PDU (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Receiving Entity ID (48-bit Entity Identifier)
Supplying Entity ID (48-bit Entity Identifier)

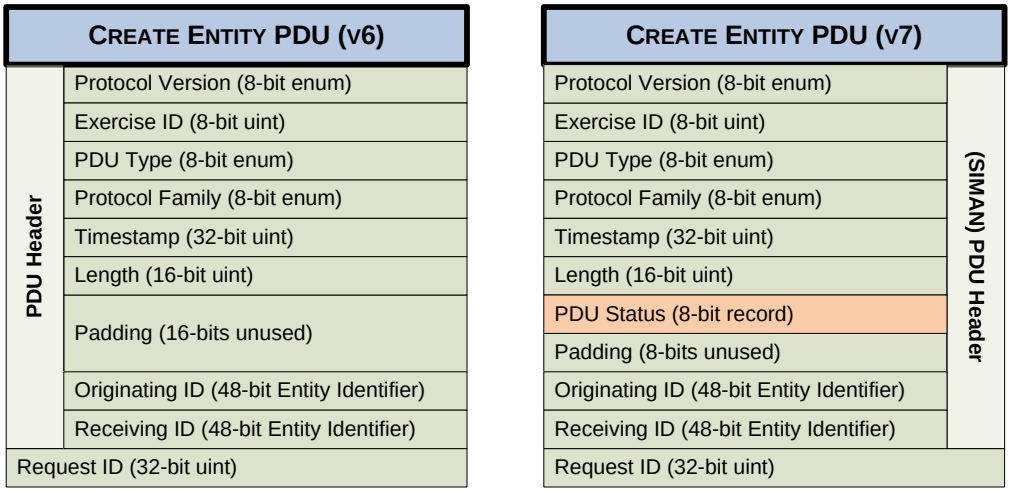

RESUPPLY CANCEL PDU (V7)
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
PDU Header
Receiving Entity ID (48-bit Entity Identifier)
Supplying Entity ID (48-bit Entity Identifier)

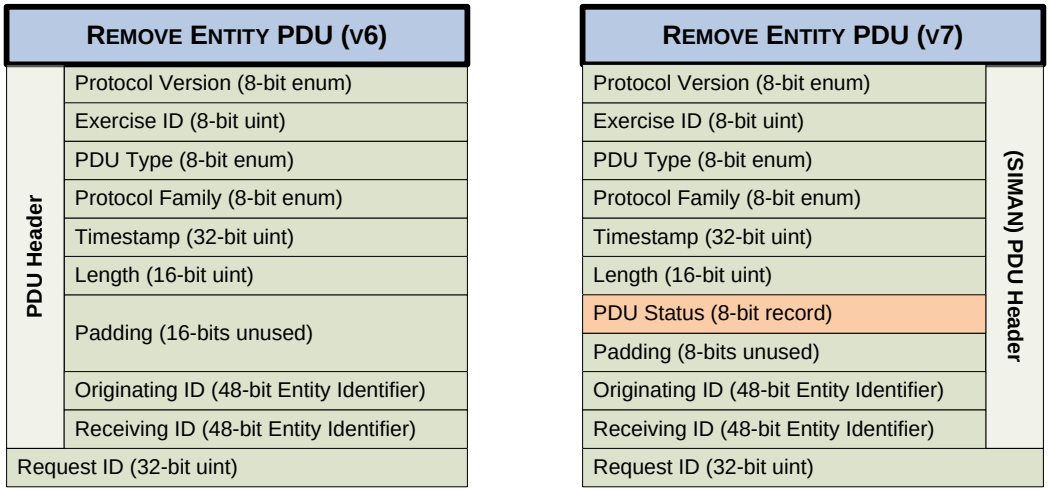
REPAIR COMPLETE PDU (V6)	
PDU Header	Protocol Version (8-bit enum)
	Exercise ID (8-bit uint)
	PDU Type (8-bit enum)
	Protocol Family (8-bit enum)
	Timestamp (32-bit uint)
	Length (16-bit uint)
	Padding (16-bits unused)
Receiving Entity ID (48-bit Entity Identifier)	
Repairing Entity ID (48-bit Entity Identifier)	
Repair (16-bit enum)	
Padding (16-bits unused)	

REPAIR COMPLETE PDU (V7)	
Protocol Version (8-bit enum)	PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (8-bits unused)	
Receiving Entity ID (48-bit Entity Identifier)	
Repairing Entity ID (48-bit Entity Identifier)	
Repair (16-bit enum)	
Padding (16-bits unused)	

REPAIR RESPONSE PDU (V6)	
PDU Header	Protocol Version (8-bit enum)
	Exercise ID (8-bit uint)
	PDU Type (8-bit enum)
	Protocol Family (8-bit enum)
	Timestamp (32-bit uint)
	Length (16-bit uint)
	Padding (16-bits unused)
Receiving Entity ID (48-bit Entity Identifier)	
Repairing Entity ID (48-bit Entity Identifier)	
Repair Result (8-bit enum)	
Padding (24-bits unused)	

REPAIR RESPONSE PDU (V7)	
Protocol Version (8-bit enum)	PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (8-bits unused)	
Receiving Entity ID (48-bit Entity Identifier)	
Repairing Entity ID (48-bit Entity Identifier)	
Repair Result (8-bit enum)	
Padding (8-bits unused)	
Padding (16-bits unused)	


CREATE ENTITY PDU (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
CREATE ENTITY PDU (V7)
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
(SIMAN) PDU Header


REMOVE ENTITY PDU (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
REMOVE ENTITY PDU (V7)
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
(SIMAN) PDU Header

START/RESUME PDU (V6)	
PDU Header	Protocol Version (8-bit enum)
	Exercise ID (8-bit uint)
	PDU Type (8-bit enum)
	Protocol Family (8-bit enum)
	Timestamp (32-bit uint)
	Length (16-bit uint)
	Padding (16-bits unused)
	Originating ID (48-bit Entity Identifier)
	Receiving ID (48-bit Entity Identifier)
Real World Time	Hour (32-bit int)
	Time Past Hour (32-bit uint)
Sim Time	Hour (32-bit int)
	Time Past Hour (32-bit uint)
Request ID (32-bit unit)	

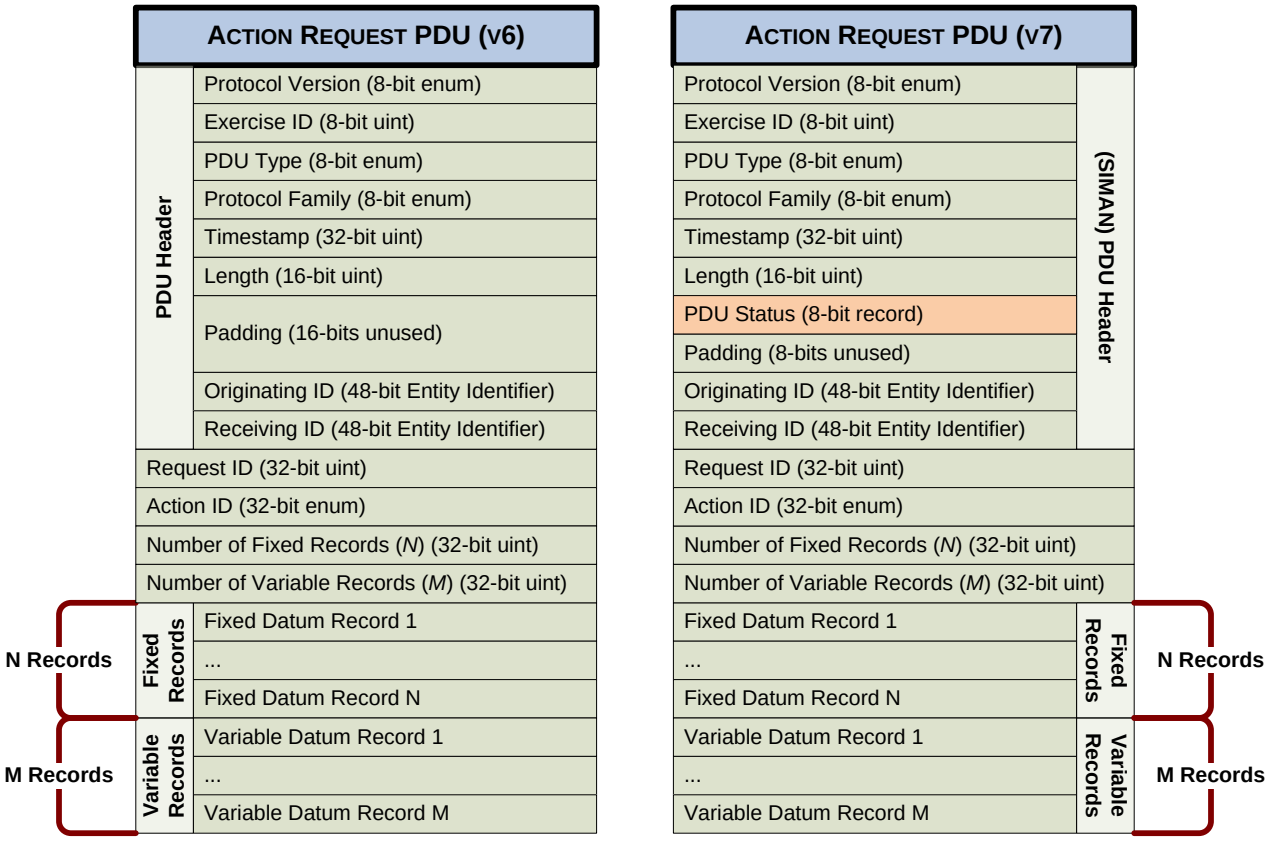
START/RESUME PDU (V7)	
Protocol Version (8-bit enum)	(SIMAN) PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (16-bits unused)	
Originating ID (48-bit Entity Identifier)	
Receiving ID (48-bit Entity Identifier)	
Hour (32-bit int)	Real World Time
Time Past Hour (32-bit uint)	
Hour (32-bit int)	Sim Time
Time Past Hour (32-bit uint)	
Request ID (32-bit unit)	

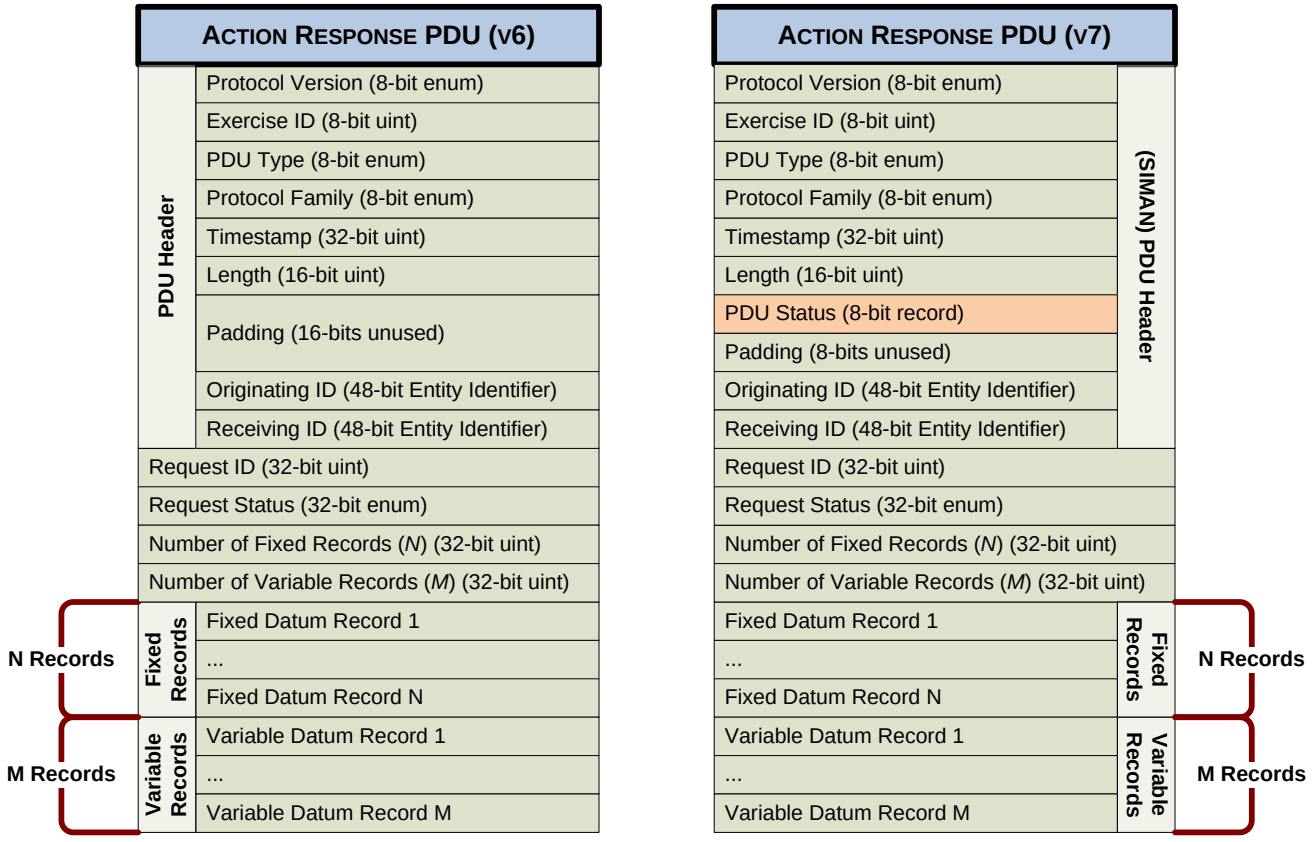
STOP/FREEZE PDU (V6)	
PDU Header	Protocol Version (8-bit enum)
	Exercise ID (8-bit uint)
	PDU Type (8-bit enum)
	Protocol Family (8-bit enum)
	Timestamp (32-bit uint)
	Length (16-bit uint)
	Padding (16-bits unused)
	Originating ID (48-bit Entity Identifier)
	Receiving ID (48-bit Entity Identifier)
Real World Time	Hour (32-bit int)
	Time Past Hour (32-bit uint)
Reason (8-bit enum)	
Frozen Behavior (8-bit enum)	
Padding (16-bit unused)	
Request ID (32-bit uint)	

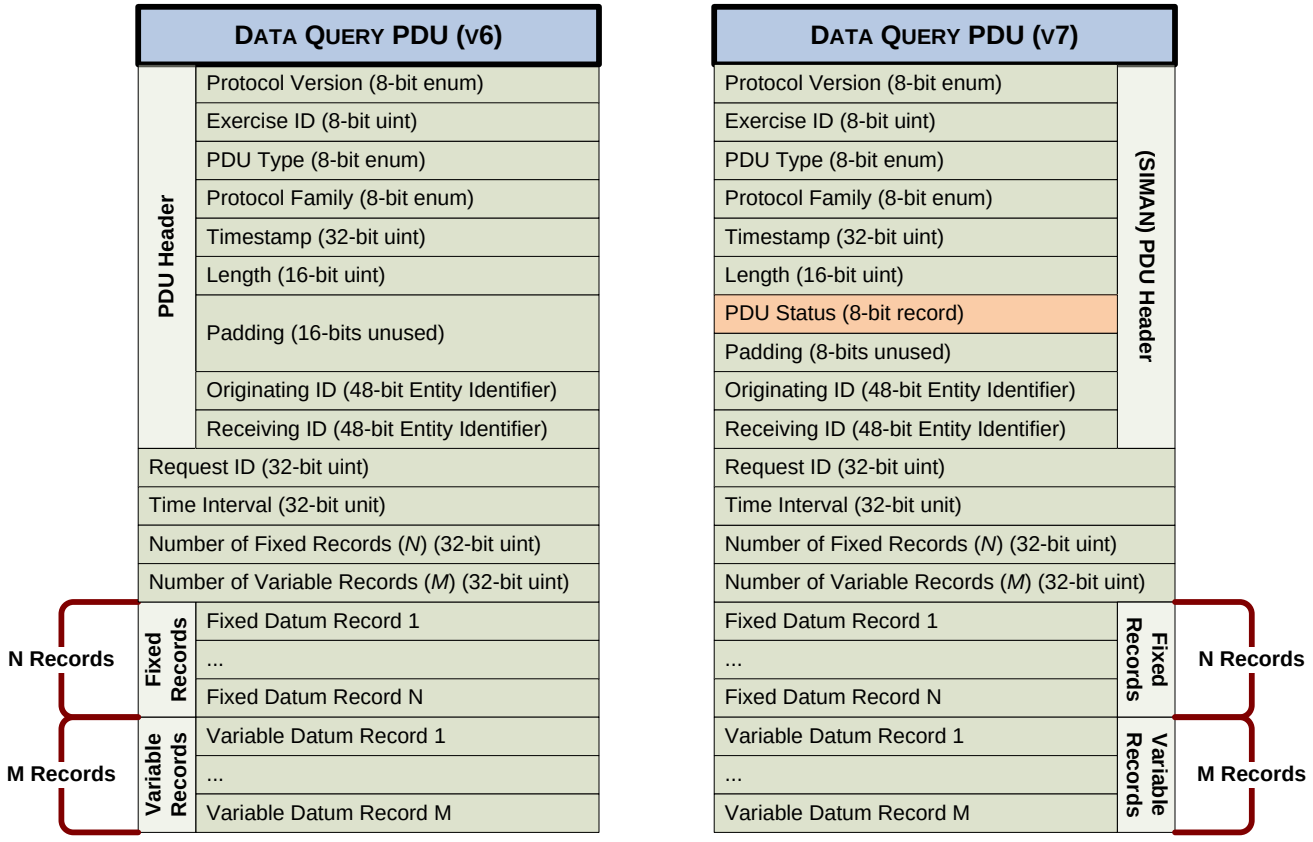
STOP/FREEZE PDU (V7)	
Protocol Version (8-bit enum)	(SIMAN) PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (16-bits unused)	
Originating ID (48-bit Entity Identifier)	
Receiving ID (48-bit Entity Identifier)	
Hour (32-bit int)	Real World Time
Time Past Hour (32-bit uint)	
Reason (8-bit enum)	
Frozen Behavior (8-bit enum)	
Padding (16-bit unused)	
Request ID (32-bit uint)	

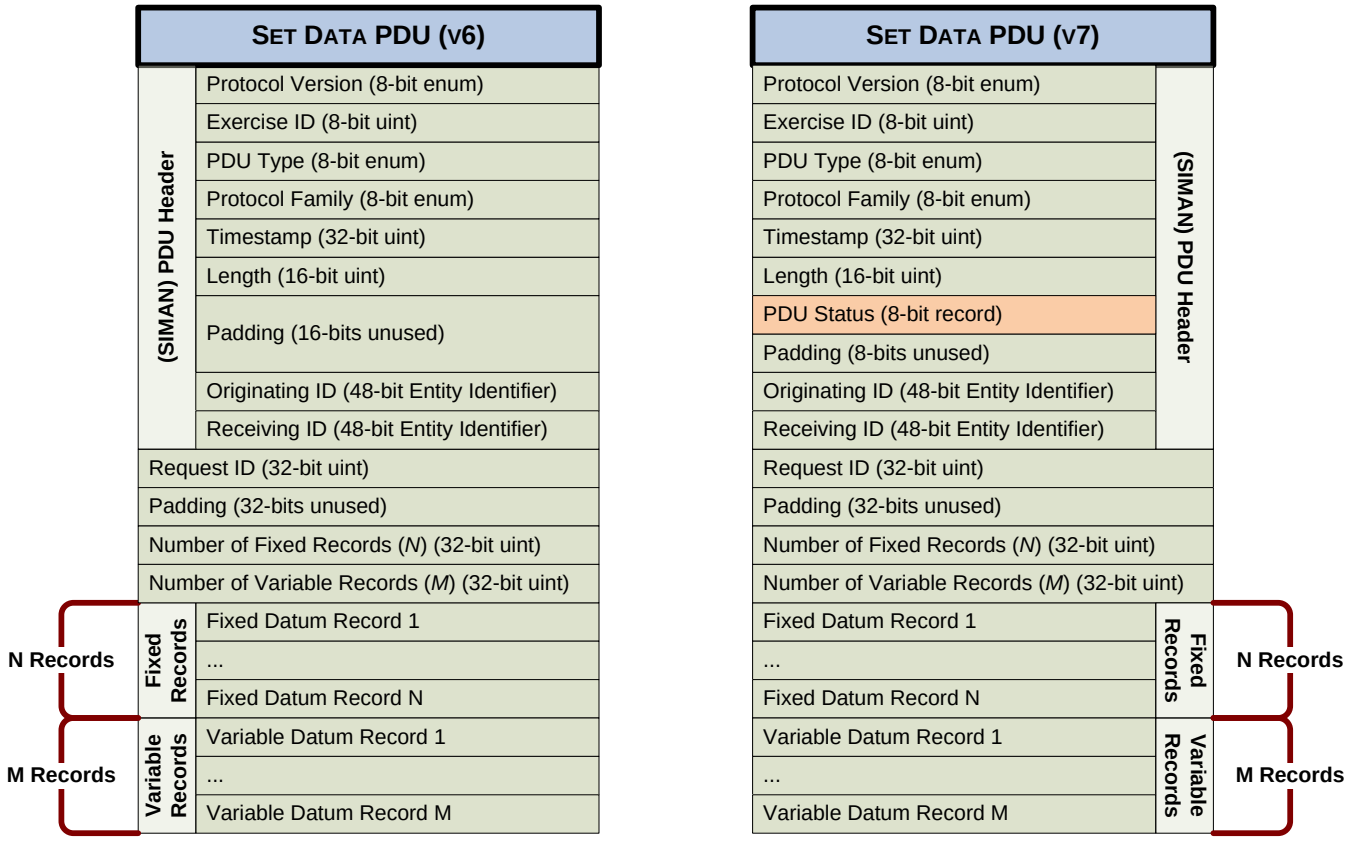
ACKNOWLEDGE (V6)	
PDU Header	Protocol Version (8-bit enum)
	Exercise ID (8-bit uint)
	PDU Type (8-bit enum)
	Protocol Family (8-bit enum)
	Timestamp (32-bit uint)
	Length (16-bit uint)
	Padding (16-bits unused)
	Originating ID (48-bit Entity Identifier)
	Receiving ID (48-bit Entity Identifier)
Acknowledge Flag (16-bit enum)	
Response Flag (16-bit enum)	
Request ID (32-bit uint)	

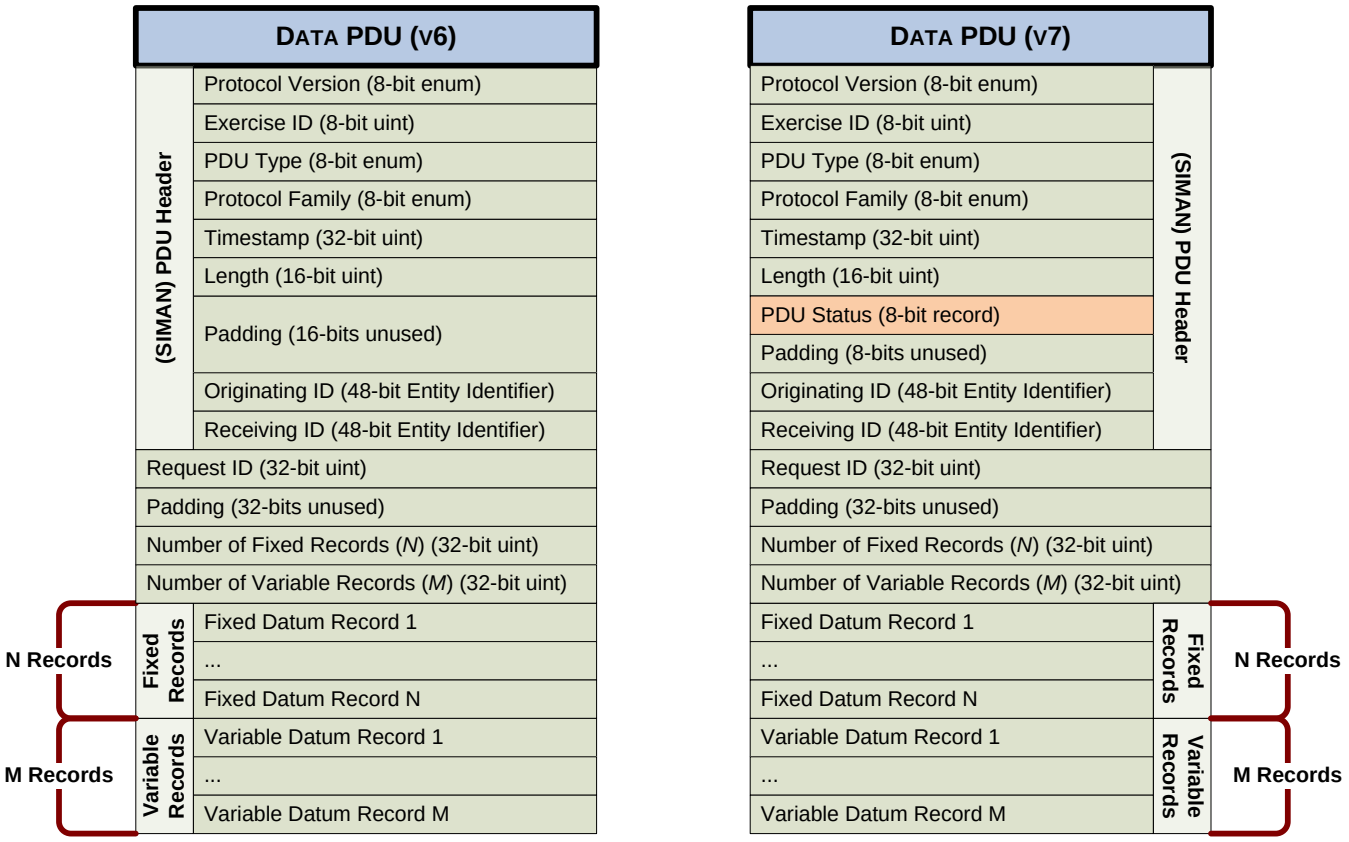
ACKNOWLEDGE PDU (V7)	
Protocol Version (8-bit enum)	(SIMAN) PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (16-bits unused)	
Originating ID (48-bit Entity Identifier)	
Receiving ID (48-bit Entity Identifier)	
Acknowledge Flag (16-bit enum)	
Response Flag (16-bit enum)	
Request ID (32-bit uint)	

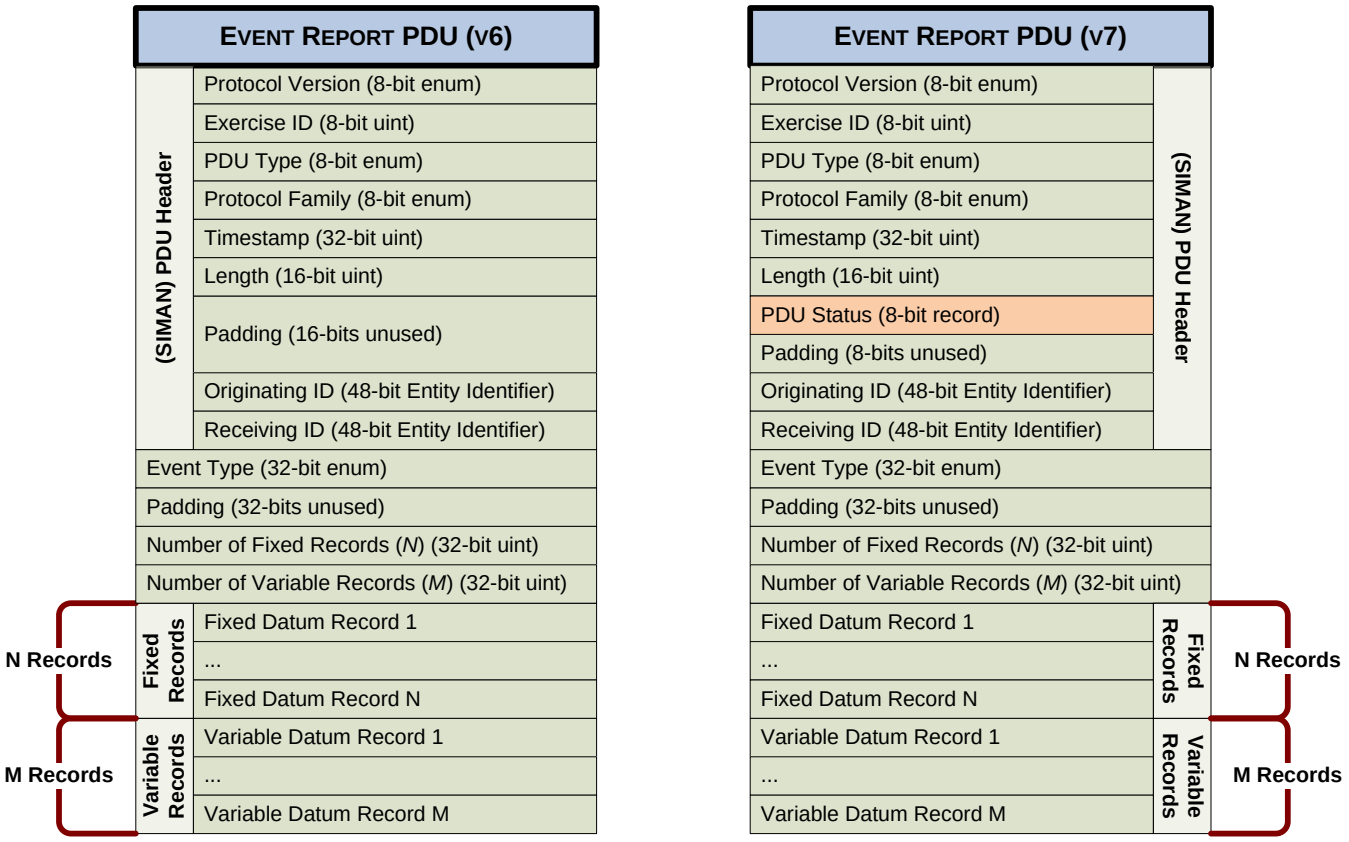

ACTION REQUEST PDU (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
Action ID (32-bit enum)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
N Records
Fixed Records
Fixed Datum Record 1
...
Fixed Datum Record N
M Records
Variable Records
Variable Datum Record 1
...
Variable Datum Record M
ACTION REQUEST PDU (V7)
(SIMAN) PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
Action ID (32-bit enum)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
Fixed Datum Record 1
...
Fixed Datum Record N
Fixed Records
N Records
Variable Datum Record 1
...
Variable Datum Record M
Variable Records
M Records

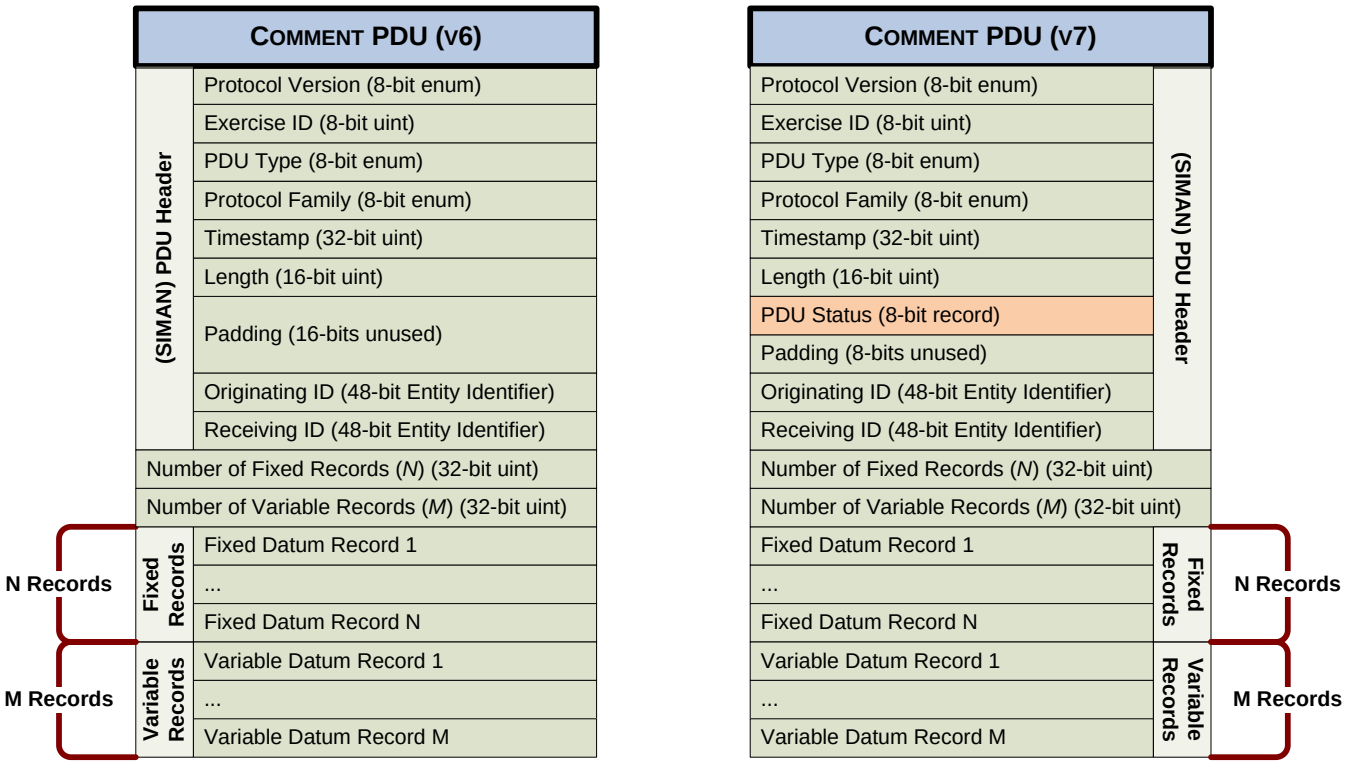

ACTION RESPONSE PDU (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
Request Status (32-bit enum)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
N Records
Fixed Records
Fixed Datum Record 1
...
Fixed Datum Record N
M Records
Variable Records
Variable Datum Record 1
...
Variable Datum Record M
ACTION RESPONSE PDU (V7)
(SIMAN) PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
Request Status (32-bit enum)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
Fixed Datum Record 1
...
Fixed Datum Record N
Fixed Records
N Records
Variable Datum Record 1
...
Variable Datum Record M
Variable Records
M Records

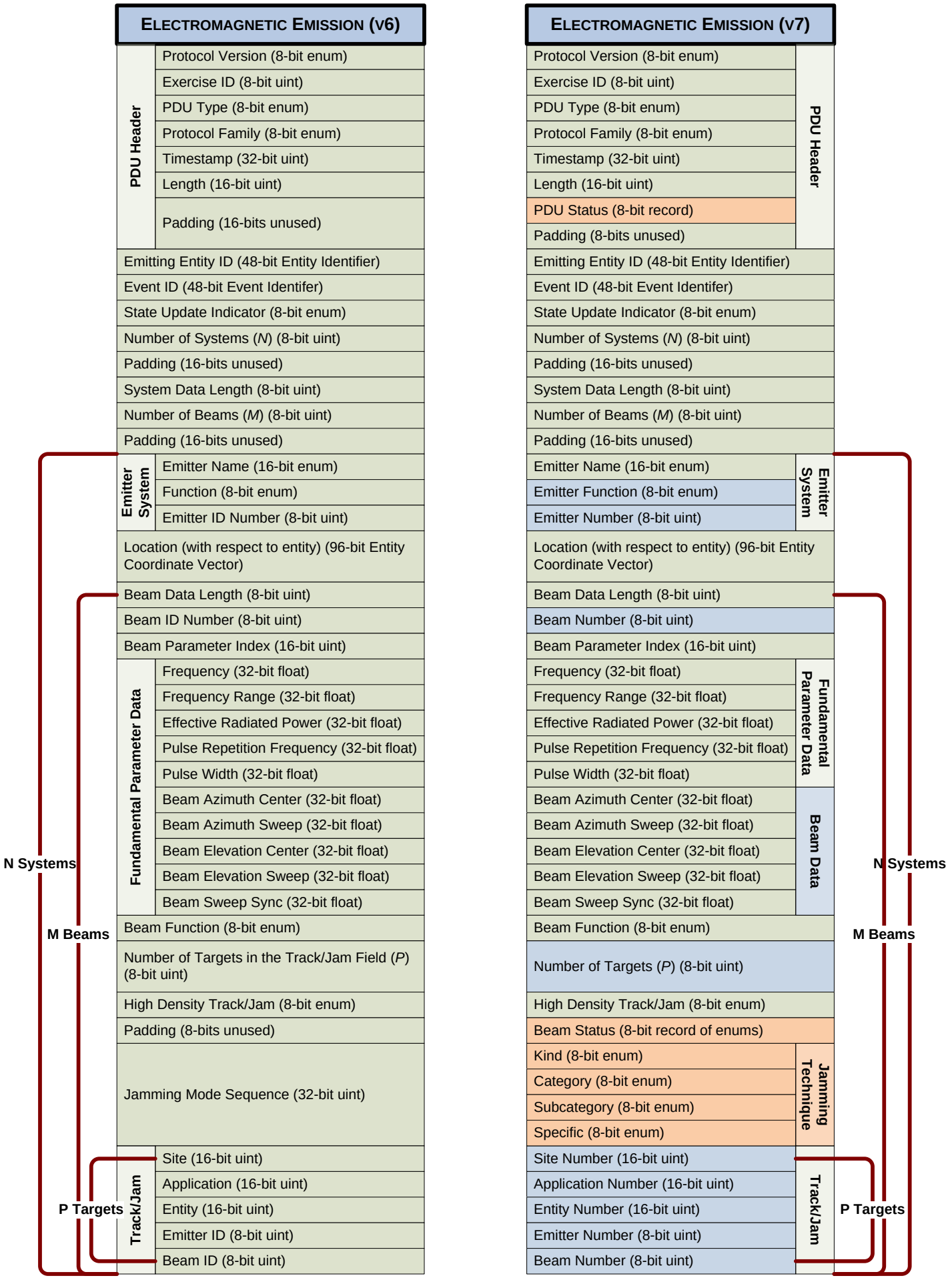

DATA QUERY PDU (v6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
Time Interval (32-bit unit)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
N Records
Fixed Records
Fixed Datum Record 1
...
Fixed Datum Record N
M Records
Variable Records
Variable Datum Record 1
...
Variable Datum Record M
DATA QUERY PDU (v7)
(SIMAN) PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
Time Interval (32-bit unit)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
Fixed Datum Record 1
...
Fixed Datum Record N
Fixed Records
N Records
Variable Datum Record 1
...
Variable Datum Record M
Variable Records
M Records


SET DATA PDU (V6)
(SIMAN) PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
Padding (32-bits unused)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
N Records
Fixed Records
Fixed Datum Record 1
...
Fixed Datum Record N
M Records
Variable Records
Variable Datum Record 1
...
Variable Datum Record M
SET DATA PDU (V7)
(SIMAN) PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
Padding (32-bits unused)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
Fixed Datum Record 1
...
Fixed Datum Record N
Fixed Records
N Records
Variable Datum Record 1
...
Variable Datum Record M
Variable Records
M Records


DATA PDU (v6)
(SIMAN) PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
Padding (32-bits unused)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
N Records
Fixed Records
Fixed Datum Record 1
...
Fixed Datum Record N
M Records
Variable Records
Variable Datum Record 1
...
Variable Datum Record M
DATA PDU (v7)
(SIMAN) PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Request ID (32-bit uint)
Padding (32-bits unused)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
Fixed Records
Fixed Datum Record 1
...
Fixed Datum Record N
N Records
Variable Records
Variable Datum Record 1
...
Variable Datum Record M
M Records


EVENT REPORT PDU (V6)
(SIMAN) PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Event Type (32-bit enum)
Padding (32-bits unused)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
N Records
Fixed Records
Fixed Datum Record 1
...
Fixed Datum Record N
M Records
Variable Records
Variable Datum Record 1
...
Variable Datum Record M
EVENT REPORT PDU (V7)
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
(SIMAN) PDU Header
Event Type (32-bit enum)
Padding (32-bits unused)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
Fixed Datum Record 1
...
Fixed Datum Record N
Fixed Records
N Records
Variable Datum Record 1
...
Variable Datum Record M
Variable Records
M Records

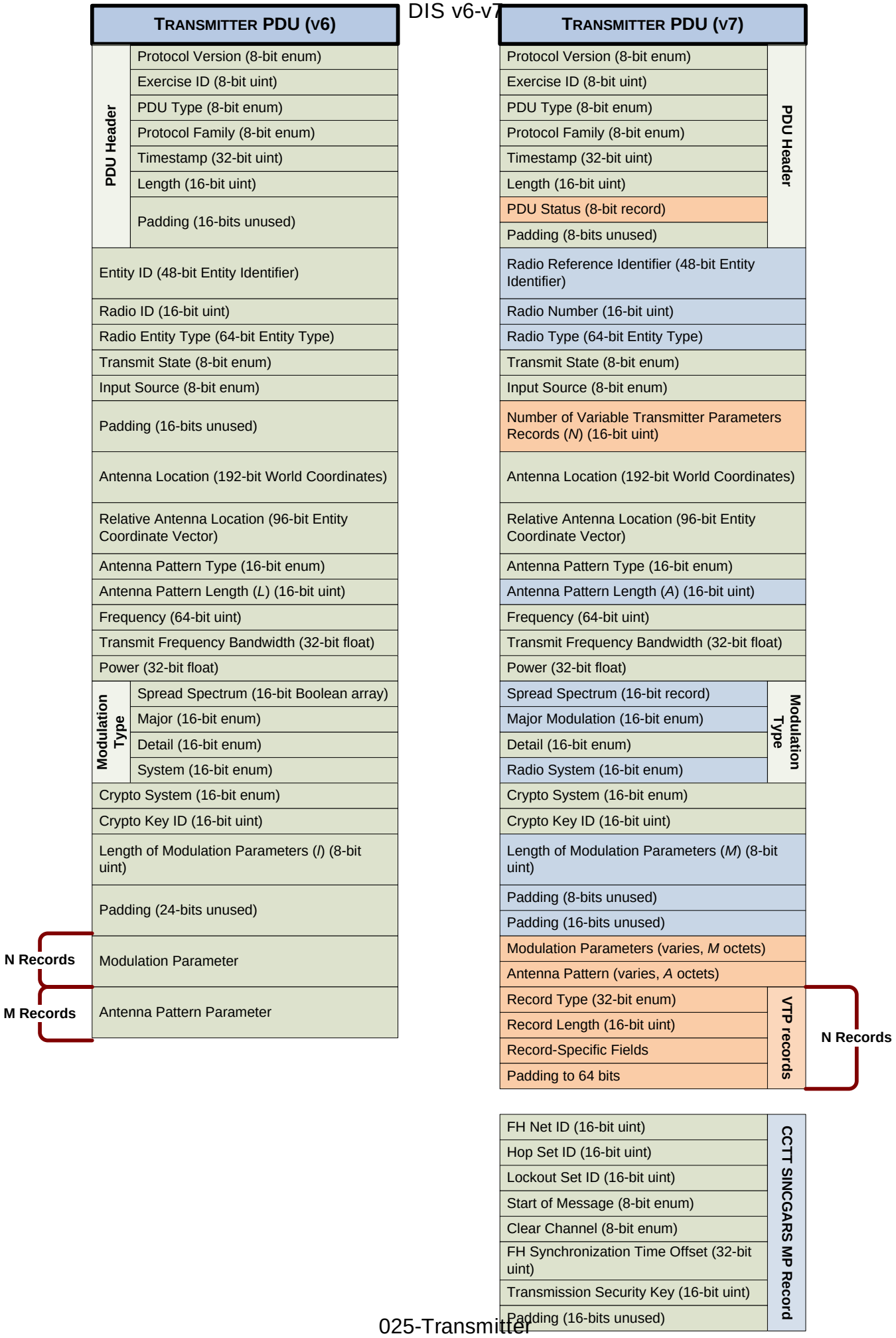

COMMENT PDU (V6)
(SIMAN) PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
N Records
Fixed Records
Fixed Datum Record 1
...
Fixed Datum Record N
M Records
Variable Records
Variable Datum Record 1
...
Variable Datum Record M
COMMENT PDU (V7)
(SIMAN) PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
Number of Fixed Records (N) (32-bit uint)
Number of Variable Records (M) (32-bit uint)
Fixed Datum Record 1
...
Fixed Datum Record N
Fixed Records
N Records
Variable Datum Record 1
...
Variable Datum Record M
Variable Records
M Records


ELECTROMAGNETIC EMISSION (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Emitting Entity ID (48-bit Entity Identifier)
Event ID (48-bit Event Identifer)
State Update Indicator (8-bit enum)
Number of Systems (N) (8-bit uint)
Padding (16-bits unused)
System Data Length (8-bit uint)
Number of Beams (M) (8-bit uint)
Padding (16-bits unused)
Emitter System
Emitter Name (16-bit enum)
Function (8-bit enum)
Emitter ID Number (8-bit uint)
Location (with respect to entity) (96-bit Entity Coordinate Vector)
Beam Data Length (8-bit uint)
Beam ID Number (8-bit uint)
Beam Parameter Index (16-bit uint)
Fundamental Parameter Data
Frequency (32-bit float)
Frequency Range (32-bit float)
Effective Radiated Power (32-bit float)
Pulse Repetition Frequency (32-bit float)
Pulse Width (32-bit float)
Beam Azimuth Center (32-bit float)
Beam Azimuth Sweep (32-bit float)
Beam Elevation Center (32-bit float)
Beam Elevation Sweep (32-bit float)
Beam Sweep Sync (32-bit float)
Beam Function (8-bit enum)
Number of Targets in the Track/Jam Field (P) (8-bit uint)
High Density Track/Jam (8-bit enum)
Padding (8-bits unused)
Jamming Mode Sequence (32-bit uint)
Track/Jam
Site (16-bit uint)
Application (16-bit uint)
Entity (16-bit uint)
Emitter ID (8-bit uint)
Beam ID (8-bit uint)
N Systems
M Beams
P Targets
ELECTROMAGNETIC EMISSION (V7)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Emitting Entity ID (48-bit Entity Identifier)
Event ID (48-bit Event Identifer)
State Update Indicator (8-bit enum)
Number of Systems (N) (8-bit uint)
Padding (16-bits unused)
System Data Length (8-bit uint)
Number of Beams (M) (8-bit uint)
Padding (16-bits unused)
Emitter System
Emitter Name (16-bit enum)
Emitter Function (8-bit enum)
Emitter Number (8-bit uint)
Location (with respect to entity) (96-bit Entity Coordinate Vector)
Beam Data Length (8-bit uint)
Beam Number (8-bit uint)
Beam Parameter Index (16-bit uint)
Fundamental Parameter Data
Frequency (32-bit float)
Frequency Range (32-bit float)
Effective Radiated Power (32-bit float)
Pulse Repetition Frequency (32-bit float)
Pulse Width (32-bit float)
Beam Data
Beam Azimuth Center (32-bit float)
Beam Azimuth Sweep (32-bit float)
Beam Elevation Center (32-bit float)
Beam Elevation Sweep (32-bit float)
Beam Sweep Sync (32-bit float)
Beam Function (8-bit enum)
Number of Targets (P) (8-bit uint)
High Density Track/Jam (8-bit enum)
Beam Status (8-bit record of enums)
Jamming Technique
Kind (8-bit enum)
Category (8-bit enum)
Subcategory (8-bit enum)
Specific (8-bit enum)
Track/Jam
Site Number (16-bit uint)
Application Number (16-bit uint)
Entity Number (16-bit uint)
Emitter Number (8-bit uint)
Beam Number (8-bit uint)
N Systems
M Beams
P Targets

DESIGNATOR PDU (V6)	
PDU Header	Protocol Version (8-bit enum)
	Exercise ID (8-bit uint)
	PDU Type (8-bit enum)
	Protocol Family (8-bit enum)
	Timestamp (32-bit uint)
	Length (16-bit uint)
	Padding (16-bits unused)
Designating Entity ID (48-bit Entity Identifier)	
Code Name (16-bit enum)	
Designated Entity ID (48-bit Entity Identifier)	
Designator Code (16-bit enum)	
Designator Power (32-bit float)	
Designator Wavelength (32-bit float)	
Designator Spot with respect to Designated Entity (96-bit Entity Coordinate Vector)	
Designator Spot Location (192-bit World Coordinates)	
Dead Reckoning Algorithm (8-bit enum)	
Padding (24-bits unused)	
Entity Linear Acceleration (96-bit Linear Acceleration Vector)	

DESIGNATOR PDU (V7)	
Protocol Version (8-bit enum)	PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (8-bits unused)	
Designating Entity ID (48-bit Entity Identifier)	
Code Name (16-bit enum)	
Designated Entity ID (48-bit Entity Identifier)	
Designator Code (16-bit enum)	
Designator Power (32-bit float)	
Designator Wavelength (32-bit float)	
Designator Spot with respect to Designated Entity (96-bit Entity Coordinate Vector)	
Designator Spot Location (192-bit World Coordinates)	
Dead Reckoning Algorithm (8-bit enum)	
Padding (8-bits unused)	
Padding (16-bits unused)	
Entity Linear Acceleration (96-bit Linear Acceleration Vector)	

DESIGNATOR PDU (V-DIS)	
Protocol Version (8-bit enum)	PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (8-bits unused)	
Designating Entity ID (48-bit Entity Identifier)	
Designator Spot Type (8-bit enum)	
Designator System Name (8-bit enum)	
Designated Object ID (48-bit Object Identifier)	
Designator Code (16-bit uint)	
Designator Power (32-bit float)	
Designator Wavelength (32-bit float)	
Designator Spot with respect to Designated Object (96-bit Entity Coordinate Vector)	
Designator Spot Location (192-bit World Coordinates)	
Dead Reckoning Algorithm (8-bit enum)	
Flash Rate (8-bit uint)	
Designator System Number (8-bit uint)	
Laser Function (8-bit enum)	
Designator Beam Origin Offset (96-bit Entity Coordinate Vector)	


TRANSMITTER PDU (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Entity ID (48-bit Entity Identifier)
Radio ID (16-bit uint)
Radio Entity Type (64-bit Entity Type)
Transmit State (8-bit enum)
Input Source (8-bit enum)
Padding (16-bits unused)
Antenna Location (192-bit World Coordinates)
Relative Antenna Location (96-bit Entity Coordinate Vector)
Antenna Pattern Type (16-bit enum)
Antenna Pattern Length (L) (16-bit uint)
Frequency (64-bit uint)
Transmit Frequency Bandwidth (32-bit float)
Power (32-bit float)
Modulation Type
Spread Spectrum (16-bit Boolean array)
Major (16-bit enum)
Detail (16-bit enum)
System (16-bit enum)
Crypto System (16-bit enum)
Crypto Key ID (16-bit uint)
Length of Modulation Parameters (l) (8-bit uint)
Padding (24-bits unused)
N Records
Modulation Parameter
M Records
Antenna Pattern Parameter
TRANSMITTER PDU (V7)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Radio Reference Identifier (48-bit Entity Identifier)
Radio Number (16-bit uint)
Radio Type (64-bit Entity Type)
Transmit State (8-bit enum)
Input Source (8-bit enum)
Number of Variable Transmitter Parameters Records (N) (16-bit uint)
Antenna Location (192-bit World Coordinates)
Relative Antenna Location (96-bit Entity Coordinate Vector)
Antenna Pattern Type (16-bit enum)
Antenna Pattern Length (A) (16-bit uint)
Frequency (64-bit uint)
Transmit Frequency Bandwidth (32-bit float)
Power (32-bit float)
Modulation Type
Spread Spectrum (16-bit record)
Major Modulation (16-bit enum)
Detail (16-bit enum)
Radio System (16-bit enum)
Crypto System (16-bit enum)
Crypto Key ID (16-bit uint)
Length of Modulation Parameters (M) (8-bit uint)
Padding (8-bits unused)
Padding (16-bits unused)
Modulation Parameters (varies, M octets)
Antenna Pattern (varies, A octets)
VTP records
Record Type (32-bit enum)
Record Length (16-bit uint)
Record-Specific Fields
Padding to 64 bits
N Records
CCTT SINCGARS MP Record
FH Net ID (16-bit uint)
Hop Set ID (16-bit uint)
Lockout Set ID (16-bit uint)
Start of Message (8-bit enum)
Clear Channel (8-bit enum)
FH Synchronization Time Offset (32-bit uint)
Transmission Security Key (16-bit uint)
Padding (16-bits unused)

SIGNAL PDU (V6)

PDU Header	Protocol Version (8-bit enum)
	Exercise ID (8-bit uint)
	PDU Type (8-bit enum)
	Protocol Family (8-bit enum)
	Timestamp (32-bit uint)
	Length (16-bit uint)
	Padding (16-bits unused)
Entity ID (48-bit Entity Identifier)	
Radio ID (16-bit uint)	
Encoding Scheme (16-bit enum)	
TDL Type (16-bit enum)	
Sample Rate (32-bit int)	
Data Length (16-bit int)	
Samples (16-bit int)	
Data #0 (8-bit uint)	
...	
Data #N (8-bit uint)	

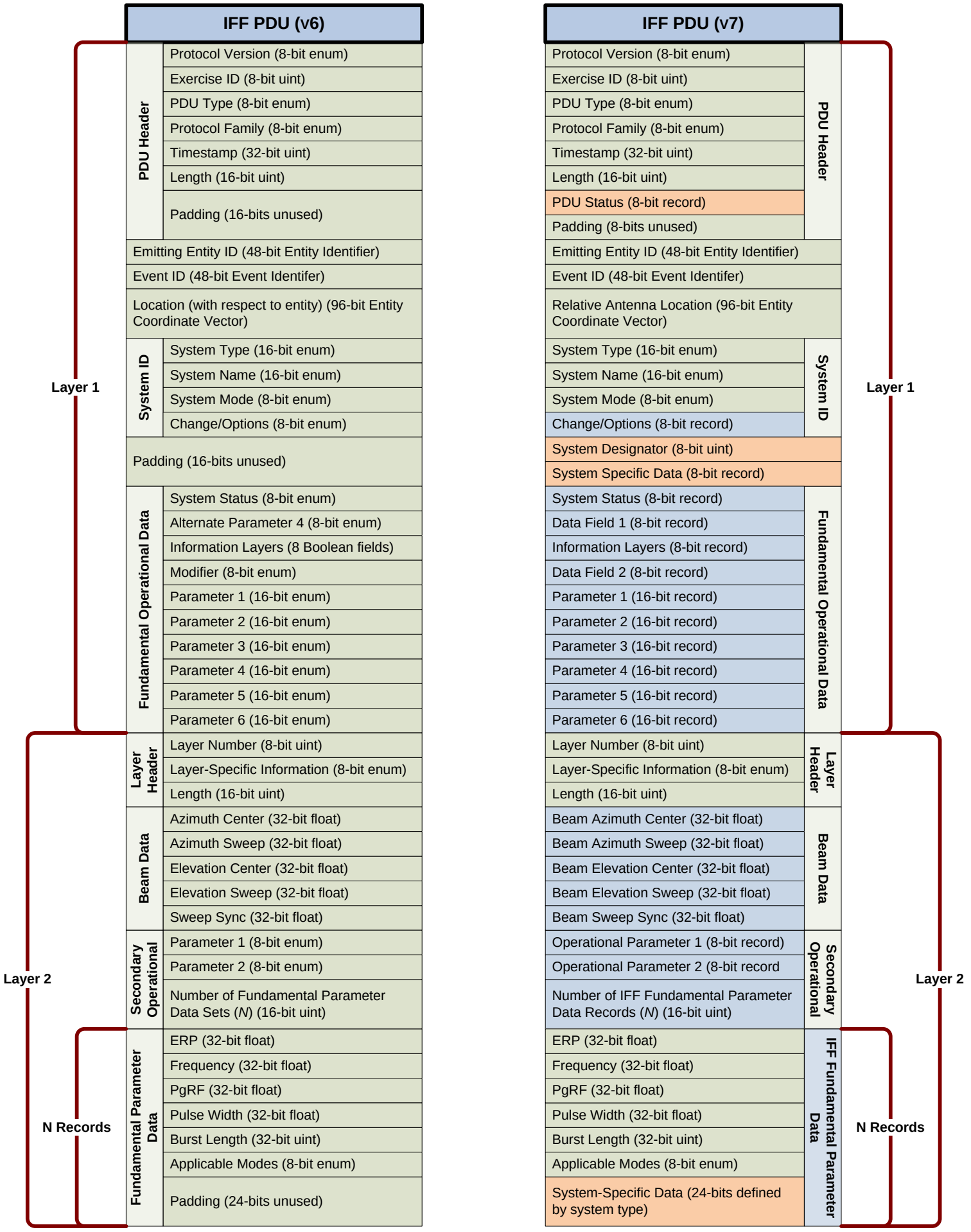
SIGNAL PDU (V7)

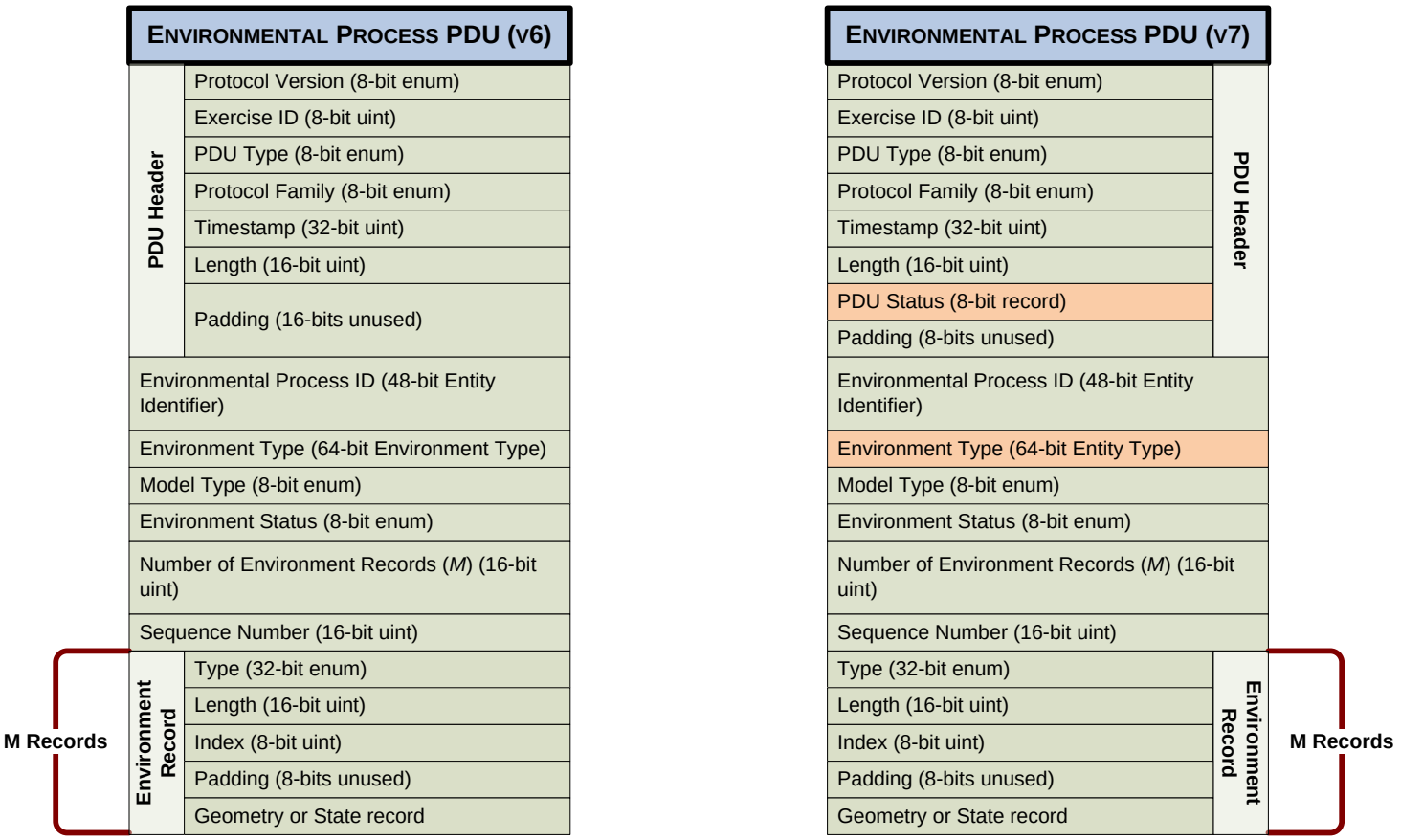
Protocol Version (8-bit enum)	PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (8-bits unused)	
Radio Reference Identifier (48-bit Entity Identifier)	
Radio Number (16-bit uint)	
Encoding Scheme (16-bit record)	
TDL Type (16-bit enum)	
Sample Rate (32-bit uint)	
Data Length (*K*) (16-bit uint)	
Samples (16-bit uint)	
Data (varies, K bits)	
Padding (to 32-bit boundary)	

Reserved (160-bits reserved)	V-DIS Digital Message Data
Header Length (16-bit uint)	
Message Format (8-bit enum)	
Version (8-bit enum)	
Message ID (32-bit uint)	
Segment Number (32-bit uint)	
Total Segments (32-bit uint)	
Message Number (32-bit record)	
Source Address (64-bit string, 8 chars)	
Number of Info Messages (8-bit uint)	
Padding (8-bits unused)	
Padding (16-bits unused)	
Precedence (8-bit enum)	
Classification (8-bit enum)	
Destination Type (8-bit enum)	
Number of Destinations (N) (8-bit uint)	
Destination Address #1 (64-bit record)	
...	
Destination Address #N (64-bit record)	
Message Data (varies)	

RECEIVER PDU (V6)	
PDU Header	Protocol Version (8-bit enum)
	Exercise ID (8-bit uint)
	PDU Type (8-bit enum)
	Protocol Family (8-bit enum)
	Timestamp (32-bit uint)
	Length (16-bit uint)
	Padding (16-bits unused)
Entity ID (48-bit Entity Identifier)	
Radio ID (16-bit uint)	
Receiver State (16-bit enum)	
Padding (16-bits unused)	
Received Power (32-bit float)	
Transmitter Entity ID (48-bit Entity Identifier)	
Transmitter Radio ID (16-bit uint)	

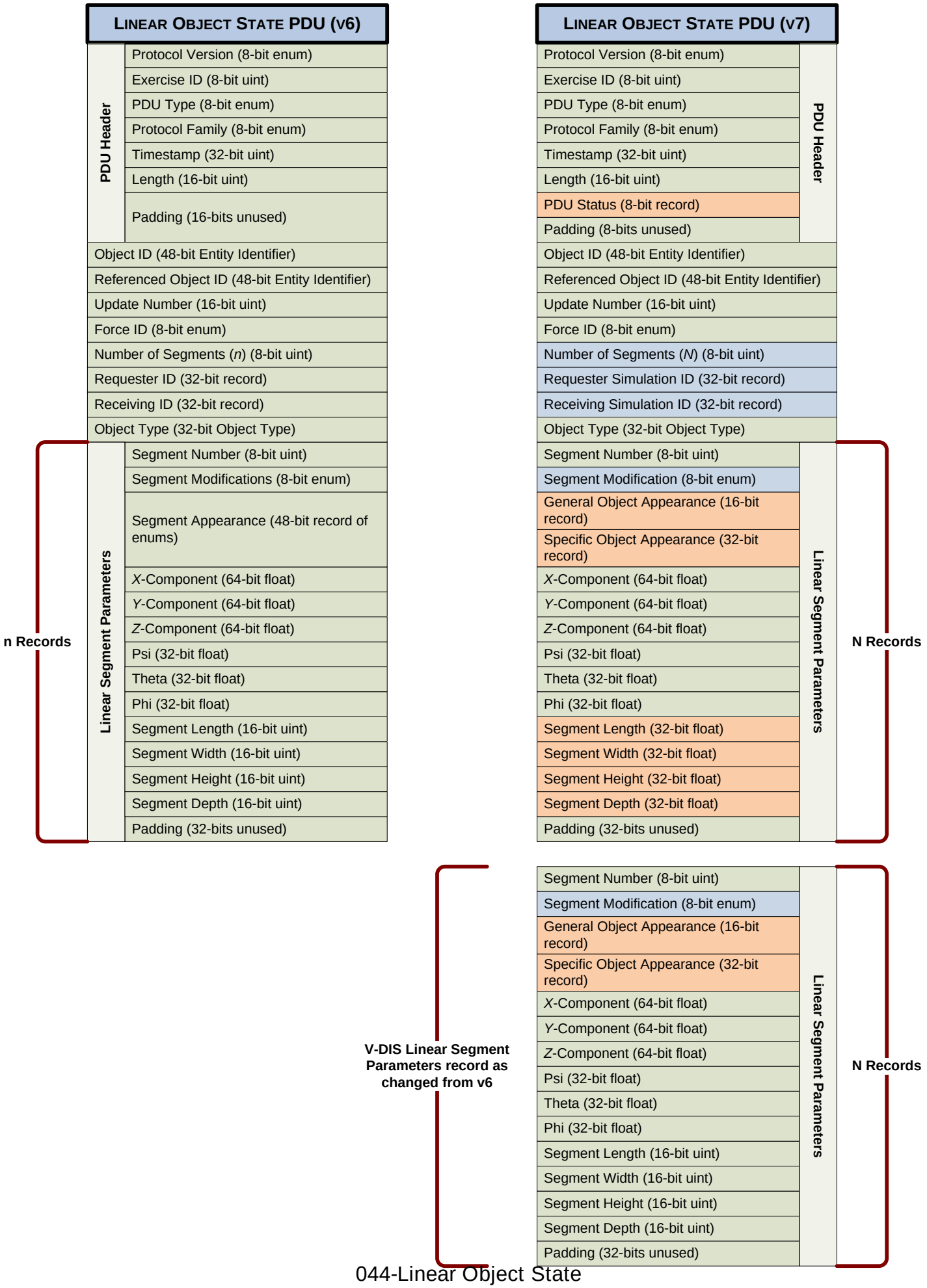
RECEIVER PDU (V7)	
Protocol Version (8-bit enum)	PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (8-bits unused)	
Radio Reference Identifier (48-bit Entity Identifier)	
Radio Number (16-bit uint)	
Receiver State (16-bit enum)	
Padding (16-bits unused)	
Received Power (32-bit float)	
Transmitter Radio Reference Identifier (48-bit Entity Identifier)	
Transmitter Radio Number (16-bit uint)	

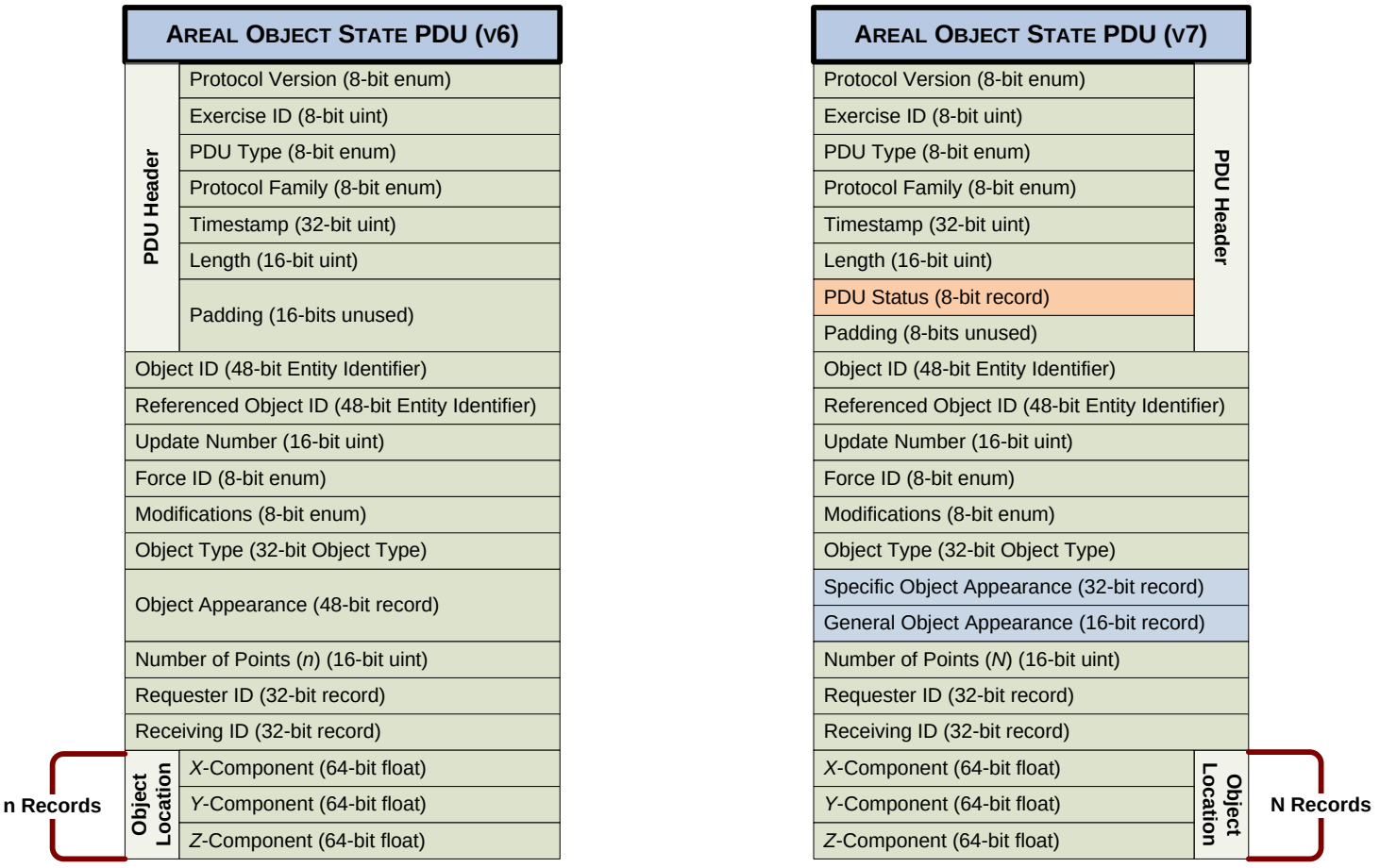

IFF PDU (v6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Emitting Entity ID (48-bit Entity Identifier)
Event ID (48-bit Event Identifer)
Location (with respect to entity) (96-bit Entity Coordinate Vector)
System ID
System Type (16-bit enum)
System Name (16-bit enum)
System Mode (8-bit enum)
Change/Options (8-bit enum)
Padding (16-bits unused)
Fundamental Operational Data
System Status (8-bit enum)
Alternate Parameter 4 (8-bit enum)
Information Layers (8 Boolean fields)
Modifier (8-bit enum)
Parameter 1 (16-bit enum)
Parameter 2 (16-bit enum)
Parameter 3 (16-bit enum)
Parameter 4 (16-bit enum)
Parameter 5 (16-bit enum)
Parameter 6 (16-bit enum)
Layer Header
Layer Number (8-bit uint)
Layer-Specific Information (8-bit enum)
Length (16-bit uint)
Beam Data
Azimuth Center (32-bit float)
Azimuth Sweep (32-bit float)
Elevation Center (32-bit float)
Elevation Sweep (32-bit float)
Sweep Sync (32-bit float)
Secondary Operational
Parameter 1 (8-bit enum)
Parameter 2 (8-bit enum)
Number of Fundamental Parameter Data Sets (N) (16-bit uint)
Fundamental Parameter Data
ERP (32-bit float)
Frequency (32-bit float)
PgRF (32-bit float)
Pulse Width (32-bit float)
Burst Length (32-bit uint)
Applicable Modes (8-bit enum)
Padding (24-bits unused)
Layer 1
Layer 2
N Records
IFF PDU (v7)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Emitting Entity ID (48-bit Entity Identifier)
Event ID (48-bit Event Identifer)
Relative Antenna Location (96-bit Entity Coordinate Vector)
System ID
System Type (16-bit enum)
System Name (16-bit enum)
System Mode (8-bit enum)
Change/Options (8-bit record)
System Designator (8-bit uint)
System Specific Data (8-bit record)
Fundamental Operational Data
System Status (8-bit record)
Data Field 1 (8-bit record)
Information Layers (8-bit record)
Data Field 2 (8-bit record)
Parameter 1 (16-bit record)
Parameter 2 (16-bit record)
Parameter 3 (16-bit record)
Parameter 4 (16-bit record)
Parameter 5 (16-bit record)
Parameter 6 (16-bit record)
Layer Header
Layer Number (8-bit uint)
Layer-Specific Information (8-bit enum)
Length (16-bit uint)
Beam Data
Beam Azimuth Center (32-bit float)
Beam Azimuth Sweep (32-bit float)
Beam Elevation Center (32-bit float)
Beam Elevation Sweep (32-bit float)
Beam Sweep Sync (32-bit float)
Secondary Operational
Operational Parameter 1 (8-bit record)
Operational Parameter 2 (8-bit record
Number of IFF Fundamental Parameter Data Records (N) (16-bit uint)
IFF Fundamental Parameter Data
ERP (32-bit float)
Frequency (32-bit float)
PgRF (32-bit float)
Pulse Width (32-bit float)
Burst Length (32-bit uint)
Applicable Modes (8-bit enum)
System-Specific Data (24-bits defined by system type)
Layer 1
Layer 2
N Records

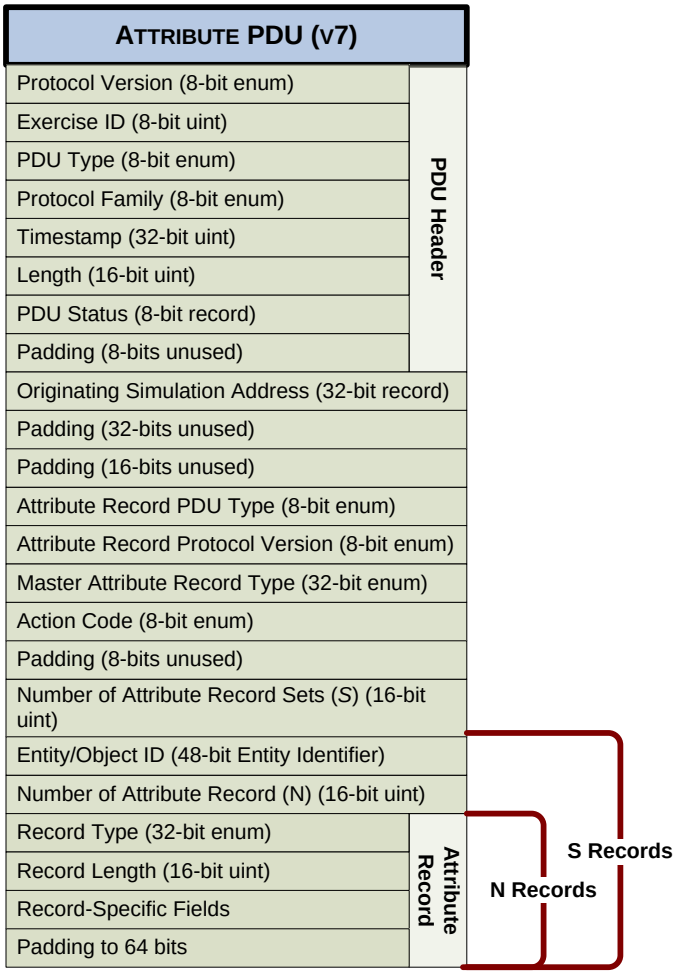

ENVIRONMENTAL PROCESS PDU (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Environmental Process ID (48-bit Entity Identifier)
Environment Type (64-bit Environment Type)
Model Type (8-bit enum)
Environment Status (8-bit enum)
Number of Environment Records (M) (16-bit uint)
Sequence Number (16-bit uint)
M Records
Environment Record
Type (32-bit enum)
Length (16-bit uint)
Index (8-bit uint)
Padding (8-bits unused)
Geometry or State record
ENVIRONMENTAL PROCESS PDU (V7)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Environmental Process ID (48-bit Entity Identifier)
Environment Type (64-bit Entity Type)
Model Type (8-bit enum)
Environment Status (8-bit enum)
Number of Environment Records (M) (16-bit uint)
Sequence Number (16-bit uint)
Environment Record
Type (32-bit enum)
Length (16-bit uint)
Index (8-bit uint)
Padding (8-bits unused)
Geometry or State record
M Records

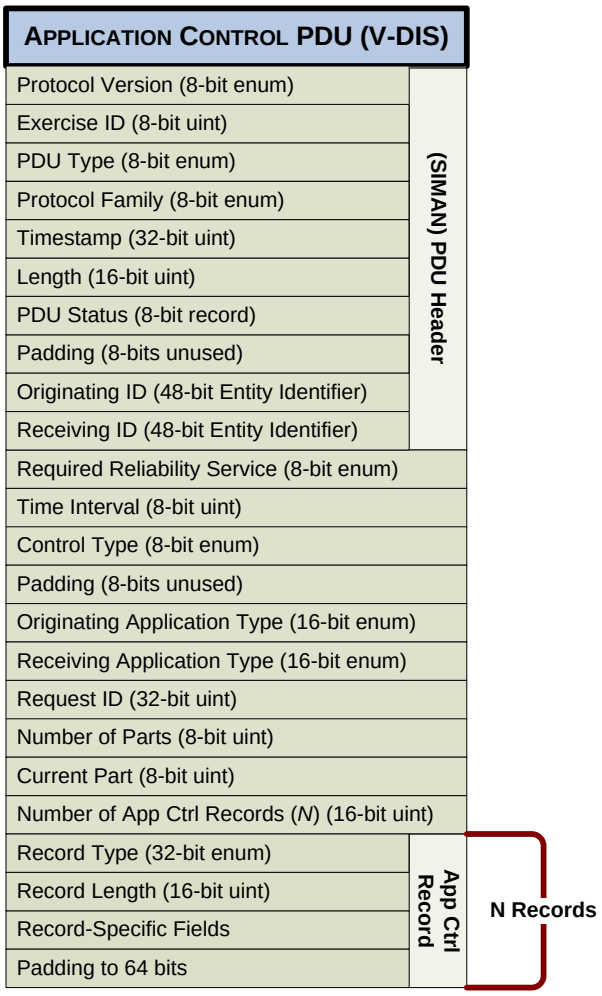
POINT OBJECT STATE PDU (V6)	
PDU Header	Protocol Version (8-bit enum)
	Exercise ID (8-bit uint)
	PDU Type (8-bit enum)
	Protocol Family (8-bit enum)
	Timestamp (32-bit uint)
	Length (16-bit uint)
	Padding (16-bits unused)
Object ID (48-bit Entity Identifier)	
Referenced Object ID (48-bit Entity Identifier)	
Update Number (16-bit uint)	
Force ID (8-bit enum)	
Modifications (8-bit enum)	
Object Type (32-bit Object Type)	
Object Location (192-bit World Coordinates)	
Object Orientation (96-bit Euler Angles)	
Object Appearance (48-bit record of enums)	
Padding (16-bits unused)	
Requester ID (32-bit record)	
Receiving ID (32-bit record)	
Padding (32-bits unused)	

POINT OBJECT STATE PDU (V7)	
Protocol Version (8-bit enum)	PDU Header
Exercise ID (8-bit uint)	
PDU Type (8-bit enum)	
Protocol Family (8-bit enum)	
Timestamp (32-bit uint)	
Length (16-bit uint)	
PDU Status (8-bit record)	
Padding (8-bits unused)	
Object ID (48-bit Entity Identifier)	
Referenced Object ID (48-bit Entity Identifier)	
Update Number (16-bit uint)	
Force ID (8-bit enum)	
Modifications (8-bit enum)	
Object Type (32-bit Object Type)	
Object Location (192-bit World Coordinates)	
Object Orientation (96-bit Euler Angles)	
Specific Object Appearance (32-bit record)	
General Object Appearance (16-bit record)	
Padding (16-bits unused)	
Requester Simulation ID (32-bit record)	
Receiving Simulation ID (32-bit record)	
Padding (32-bits unused)	


LINEAR OBJECT STATE PDU (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Object ID (48-bit Entity Identifier)
Referenced Object ID (48-bit Entity Identifier)
Update Number (16-bit uint)
Force ID (8-bit enum)
Number of Segments (n) (8-bit uint)
Requester ID (32-bit record)
Receiving ID (32-bit record)
Object Type (32-bit Object Type)
n Records
Linear Segment Parameters
Segment Number (8-bit uint)
Segment Modifications (8-bit enum)
Segment Appearance (48-bit record of enums)
X-Component (64-bit float)
Y-Component (64-bit float)
Z-Component (64-bit float)
Psi (32-bit float)
Theta (32-bit float)
Phi (32-bit float)
Segment Length (16-bit uint)
Segment Width (16-bit uint)
Segment Height (16-bit uint)
Segment Depth (16-bit uint)
Padding (32-bits unused)
LINEAR OBJECT STATE PDU (V7)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Object ID (48-bit Entity Identifier)
Referenced Object ID (48-bit Entity Identifier)
Update Number (16-bit uint)
Force ID (8-bit enum)
Number of Segments (N) (8-bit uint)
Requester Simulation ID (32-bit record)
Receiving Simulation ID (32-bit record)
Object Type (32-bit Object Type)
N Records
Linear Segment Parameters
Segment Number (8-bit uint)
Segment Modification (8-bit enum)
General Object Appearance (16-bit record)
Specific Object Appearance (32-bit record)
X-Component (64-bit float)
Y-Component (64-bit float)
Z-Component (64-bit float)
Psi (32-bit float)
Theta (32-bit float)
Phi (32-bit float)
Segment Length (32-bit float)
Segment Width (32-bit float)
Segment Height (32-bit float)
Segment Depth (32-bit float)
Padding (32-bits unused)
V-DIS Linear Segment Parameters record as changed from v6
N Records
Linear Segment Parameters
Segment Number (8-bit uint)
Segment Modification (8-bit enum)
General Object Appearance (16-bit record)
Specific Object Appearance (32-bit record)
X-Component (64-bit float)
Y-Component (64-bit float)
Z-Component (64-bit float)
Psi (32-bit float)
Theta (32-bit float)
Phi (32-bit float)
Segment Length (16-bit uint)
Segment Width (16-bit uint)
Segment Height (16-bit uint)
Segment Depth (16-bit uint)
Padding (32-bits unused)


AREAL OBJECT STATE PDU (V6)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
Padding (16-bits unused)
Object ID (48-bit Entity Identifier)
Referenced Object ID (48-bit Entity Identifier)
Update Number (16-bit uint)
Force ID (8-bit enum)
Modifications (8-bit enum)
Object Type (32-bit Object Type)
Object Appearance (48-bit record)
Number of Points (n) (16-bit uint)
Requester ID (32-bit record)
Receiving ID (32-bit record)
Object Location
X-Component (64-bit float)
Y-Component (64-bit float)
Z-Component (64-bit float)
n Records
AREAL OBJECT STATE PDU (V7)
PDU Header
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Object ID (48-bit Entity Identifier)
Referenced Object ID (48-bit Entity Identifier)
Update Number (16-bit uint)
Force ID (8-bit enum)
Modifications (8-bit enum)
Object Type (32-bit Object Type)
Specific Object Appearance (32-bit record)
General Object Appearance (16-bit record)
Number of Points (N) (16-bit uint)
Requester ID (32-bit record)
Receiving ID (32-bit record)
X-Component (64-bit float)
Y-Component (64-bit float)
Z-Component (64-bit float)
Object Location
N Records


ATTRIBUTE PDU (v7)
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
PDU Header
Originating Simulation Address (32-bit record)
Padding (32-bits unused)
Padding (16-bits unused)
Attribute Record PDU Type (8-bit enum)
Attribute Record Protocol Version (8-bit enum)
Master Attribute Record Type (32-bit enum)
Action Code (8-bit enum)
Padding (8-bits unused)
Number of Attribute Record Sets (S) (16-bit uint)
Entity/Object ID (48-bit Entity Identifier)
Number of Attribute Record (N) (16-bit uint)
Record Type (32-bit enum)
Record Length (16-bit uint)
Record-Specific Fields
Padding to 64 bits
Attribute Record
S Records
N Records


APPLICATION CONTROL PDU (V-DIS)
Protocol Version (8-bit enum)
Exercise ID (8-bit uint)
PDU Type (8-bit enum)
Protocol Family (8-bit enum)
Timestamp (32-bit uint)
Length (16-bit uint)
PDU Status (8-bit record)
Padding (8-bits unused)
Originating ID (48-bit Entity Identifier)
Receiving ID (48-bit Entity Identifier)
(SIMAN) PDU Header
Required Reliability Service (8-bit enum)
Time Interval (8-bit uint)
Control Type (8-bit enum)
Padding (8-bits unused)
Originating Application Type (16-bit enum)
Receiving Application Type (16-bit enum)
Request ID (32-bit uint)
Number of Parts (8-bit uint)
Current Part (8-bit uint)
Number of App Ctrl Records (N) (16-bit uint)
Record Type (32-bit enum)
Record Length (16-bit uint)
Record-Specific Fields
Padding to 64 bits
App Ctrl Record
N Records

Type	Name	Added		% Complete
1	Entity State	Yes		46.6%
2	Fire	Yes		
3	Detonation	Yes		
4	Collision	Yes		
5	Service Request	Yes		
6	Resupply Offer	Yes		
7	Resupply Received	Yes		
8	Resupply Cancel	Yes		
9	Repair Complete	Yes		
10	Repair Response	Yes		
11	Create Entity	Yes		
12	Remove Entity	Yes		
13	Start / Resume	Yes		
14	Stop / Freeze	Yes		
15	Acknowledge	Yes		
16	Action Request	Yes		
17	Action Response	Yes		
18	Data Query	Yes		
19	Set Data	Yes		
20	Data	Yes		
21	Event Report	Yes		
22	Comment	Yes		
23	Electromagnetic Emission	Yes		
24	Designator	Yes		
25	Transmitter	Yes		
26	Signal	Yes		
27	Receiver	Yes		
28	Identification Friend or Foe	Yes		
29	Underwater Acoustic	No		
30	Supplemental Emission / Entity State	No		
31	Intercom Signal	No		
32	Intercom Control	No		
33	Aggregate State	No		
34	Is Group Of	No		
35	Transfer Ownership	No		
36	Is Part Of	No		
37	Minefield State	No		
38	Minefield Query	No		
39	Minefield Data	No		
40	Minefield Response NAK	No		
41	Environmental Process	Yes		
42	Gridded Data	No		

Status