IPASC Data Conversion Tool

version

Data Acquisition and Management Theme of IPASC

September 11, 2020

Contents

Welcome to IPASC Data Conversion Tool's documentation!

Class references

Module: api

class ipasc_tool.api.BaseAdapter.**BaseAdapter**

abstract **generate_binary_data ()** → numpy.ndarray
#TODO very detailed decription of how the binary meta data dump should be organized. :return: numpy array

generate_meta_data () → dict

Returns:

abstract **generate_meta_data_device ()** → dict
TODO this method can be implemented using the DeviceMetaDataCreator :return:

abstract **set_metadata_value (**metadata_tag: ipasc_tool.core.Metadata.MetaDatum**)** → object
This method must be implemented to yield appropriate data for all MetaDatum elements in the MetadataTags class.

Parameters: **metadata_tag** –

Returns:

class ipasc_tool.api.adapters.DKFZ_CAMI_Experimental_System_Nrrd_File_Converter.**DKFZCAMIExperimentalSystemNrrdFileConverter** (nrrd_file_path)

generate_binary_data () → numpy.ndarray
#TODO very detailed decription of how the binary meta data dump should be organized. :return: numpy array

generate_meta_data_device () → dict
TODO this method can be implemented using the DeviceMetaDataCreator :return:

set_metadata_value (metadata_tag: ipasc_tool.core.Metadata.MetaDatum**)** → object
This method must be implemented to yield appropriate data for all MetaDatum elements in the MetadataTags class.

Parameters: **metadata_tag** –

Returns:

Module: core

class ipasc_tool.core.Metadata.**EnumeratedString** (tag, mandatory, dtype, unit='N/A', permissible_strings=None)

class ipasc_tool.core.Metadata.**MetaDatum** (tag: str, mandatory: bool, dtype: type, unit: str = 'N/A')
This class represents a meta datum. A meta datum contains all necessary information to fully characterize the meta information represented by an instance of this class.

class ipasc_tool.core.Metadata.**MetadataAcquisitionTags**
Binary time series data meta data tags

class ipasc_tool.core.Metadata.**MetadataDeviceTags**

This class defines the naming conventions of the

class ipasc_tool.core.Metadata.**NDimensionalNumpyArray** (tag, mandatory, dtype, unit='N/A', expected_array_dimension=1)

class ipasc_tool.core.Metadata.**NonNegativeNumber** (tag, mandatory, dtype, unit='N/A')

class ipasc_tool.core.Metadata.**NonNegativeNumbersInArray** (tag, mandatory, dtype, unit='N/A')

class ipasc_tool.core.Metadata.**NonNegativeWholeNumber** (tag, mandatory, dtype, unit='N/A')

class ipasc_tool.core.Metadata.**NumberWithUpperAndLowerLimit** (tag, mandatory, dtype, unit='N/A', lower_limit=- inf, upper_limit=inf)

class ipasc_tool.core.Metadata.**UnconstrainedMetaDatum** (tag, mandatory, dtype, unit='N/A')

class ipasc_tool.core.PAData.**PAData** (binary_time_series_data: numpy.ndarray = None, meta_data_acquisition: dict = None, meta_data_device: dict = None)

TODO: Detailed documentation

Module: iohandler

ipasc_tool.iohandler.file_reader.**load_data** (path: str)

TODO :param path: Path to an hdf5 file containing PAData. :return: PAData instance

ipasc_tool.iohandler.file_writer.**write_data** (path: str, pa_data: ipasc_tool.core.PAData.PAData)

TODO :param path: Path to save an hdf5 file containing PAData. :param pa_data: PAData instance :return:

Module: qualitycontrol

ipasc_tool.qualitycontrol.CompletenessChecker.**check_metadatum_from_dict** (dictionary: dict, metadatum: ipasc_tool.core.Metadata.MetaDatum)

Parameters:

- **dictionary** –
- **meta_datum** –

Returns: [log, count]

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