

Reading partial data from Store

Here is a set of interfaces that would allow reading partial data from the AIDA Store.

AIDA object would now have to manage its own data - retrieve missing data from the Store when needed, allow data parts that are not currently in use to be Garbage-Collected, backup temporary data to the Store.

```

/**
 * Since the AIDA IManagedObjects in ITree don't know their own paths,
 * we have to pass the object to the Store. Store must be able to determine
 * the ITree path of the object and path (or some sort of ID) of the corresponding
 * data in the storage
 */

public interface IPartialDataStore extends OnDemandStore {

    /**
     * To be used with any simple AIDA object that has no
     * internal structure, like: ICloud, IDataPointSet, IHistogram
     */

    IPatialData readPartialData(IManagedObject aidaObject, int row);

    /**
     * To be used with AIDA objects that has internal structure,
     * like: ITuple
     */

    IComplexPatialData readComplexPartialData(IManagedObject aidaObject, String pathInObject, int[] rows);

    /**
     * Writes partial data to the Store.
     * This method might be called by the implementation of the particular
     * IManagedObject when part of its data is Garbage-Collected and Finalized
     */

    void writePartialData(IManagedObject mo, IPartialData pd) throws IOException;

    /**
     * Writes complex partial data to the Store
     * This method might be called by the implementation of the particular
     * IManagedObject when part of its data is Garbage-Collected and Finalized
     */

    void writeComplexPartialData(IManagedObject mo, IComplexPartialData pd) throws IOException;
}

public interface IPatialData {

    int startIndex();
    int endIndex();
    String type();
    Object data();
}

public interface IComplexPatialData {

    int[] startIndices();
    int[] endIndices();
    String pathInObject();
    String type();
    Object data();
}

```

Main problem with this approach is that AIDA object that requested the partial data does not know what is it getting back - it would need to cast generic Object to something specific, like ICloud, double[], etc.