

Appendix A

Selected A-MEDIAS Class Definitions

```
public class Publisher {
    private int          nPublisherID;           /* publisher ID*/
    private String       strDescription;        /* publisher description*/
    private Advertisement[] arrAdvertisements;  /* define advertisement */
    ...}
```

Code Fragment A.1: Section of the Publisher class definition – Publisher objects represent event providers in the network of A-MEDIAS event notification servers

```
public class Advertisement {
    public final static int UPDATE_CHANGING_VALUE =1; /* relative value */
    public final static int UPDATE_CHANGING_PERCENT=2; /* percent */
    public final static int UPDATE_NEW_VALUE =4; /* new value */
    public final static int UPDATE_TIME_CHANGING =0; /* on event */
    public final static int UPDATE_TIME_SCHEDULE =1; /* on event */
    public SupportedEventType lnkEventType;
    private String            strDescription;
    private int               nUpdateValues; /* How updating. */
    private int               nUpdateTime; /* When updating. */
    ...}
```

Code Fragment A.2: Section of the Advertisement class definition – Advertisements define event types and announce events

```
public class Event {
    private SupportedEventType lnkEventType;
    private Timestamp          lnkIncomingTimeStamp;
    private Publisher          lnkPublisher;
    private AttributeValuePair[] arrAttributeValuePairs;
    ...}
```

Code Fragment A.3: Section of the Event class definition – Event objects represent event messages which describe events

```

public class Subscriber {
    private int          nSubscriberID;                /* subscriber ID */
    private String       strDescription;              /* subscriber description */
    protected Hashtable tableProfiles;
    ...
    protected boolean subscribeProfile( Profile profile)
    public void          unsubscribeAll()}

```

Code Fragment A.4: Section of the Subscriber class definition – Subscriber objects represent ENS clients in the network of A-MEDIAS event notification servers

```

public class Profile {
    protected long          nProfileID;                /* profile ID */
    protected Subscriber    lnkSubscriber;
    protected DynamicNotificationArray arrNotification;
    private Parameter       lnkParameter;
    ...
    public void             addNotification( Notification notification)
    public void             activateNotifications( boolean bActive)
    public void             notifyAll( Event event)
    public boolean          removeNotification( Notification notification)}

```

Code Fragment A.5: Section of the Profile class definition – Profile objects store a clients profile. Extended classes are primitive profile (cf. Code Fragment A.7) and composite profile (cf. Code Fragment A.8), the definition of class parameter is shown in Code Fragment A.6

```

public class Parameter {
    public final static int SELECTION_FIRST           = 1;
    public final static int SELECTION_LAST           = Integer.MAX_VALUE;
    public final static int SELECTION_ALL            = -1;
    public final static int CONSUMPTION_UNIQUEPAIRS = 0;
    public final static int CONSUMPTION_ALLPAIRS    = 1;
    public final static int CONSUMPTION_REPEATEDPAIRS = 2;
    public final static int EVALUATION_CONTINUOUS    = 0;
    public final static int EVALUATION_FINALY        = 1;
    private int nInstanceSelection;
    private int nInstanceConsumption;
    private int nEvaluationStrategy;
    ...}

```

Code Fragment A.6: Section of the Parameter class definition – Parameter objects define the composition parameters for profiles (cf. Code Fragment A.5).

```

public class PrimitiveProfile extends Profile {
    private SupportedEventType lnkSupportedType;
    private Predicate[]       arrPredicates;
    ...
    public boolean equalsProfile( Profile profile)
    public boolean coversPrimitiveProfile( PrimitiveProfile profile)
    public int      comparePrimitiveProfile( PrimitiveProfile profile)}

```

Code Fragment A.7: Section of the Primitive Profile class definition – Primitive profiles are extended profiles (cf. Code Fragment A.5).

```
public class CompositeProfile extends Profile {
    private long      nEvalTimeInterval; /* between contributing events */
    private Timestamp startTimestamp;    /* start of evaluation */
    private long      nTimeInterval; }    /* evaluation interval */
```

Code Fragment A.8: Section of the Composite Profile class definition – Composite profiles are extended profiles (cf. Code Fragment A.5).

```
public class Application{
    private int      nApplicationID;      /* application ID */
    private String   strDescription;      /* description */
    private Hashtable arrTransformationSets; /* transformations */
    ...}
```

Code Fragment A.9: Section of the Application class definition – Application objects represent the context of the service's application

