

that the missing RTP transport packet **1030** belongs to sample 2. Although retransmission could be used for the missing packet, it is possible to apply error concealment and reconstruct an XML DOM correctly with balanced nested elements based on the nesting ID information.

[0069] FIG. **11** shows yet another method of identifying a group of fragment packets in the event of packet loss in syntactic XML fragmentation using nesting IDs. A content sample 1 is shown as being partitioned into 3 fragments, each of which is contained in RTP transport packets **1100-1120**, respectively. Another content sample 2 is also shown as being partitioned into 2 fragments, each of which is contained in RTP transport packets **1130** and **1140**, respectively. From the RTP sequence numbers a receiver can determine that the second, third and fourth RTP transport packets **1110-1130** are missing. In this scenario however, it is unclear from which RTP transport packet onward, that the fragment belongs to sample 2. For instance, nesting ID 1.x for content sample 2 can start from packet 2, 3 or 4. This ambiguity makes XML reconstruction less trivial.

[0070] FIG. **12** shows another method of identifying a group of packets in the event of packet loss in syntactic XML fragmentation using nesting IDs and TotalFragmentsPerSample. A content sample 1 is shown as being partitioned into 3 fragments, each of which is contained in RTP transport packets **1200-1220**, respectively. Another content sample 2 is also shown as being partitioned into 2 fragments, each of which is contained in RTP transport packets **1230** and **1240**, respectively. From the RTP sequence numbers a receiver can determine that the second, third and fourth RTP transport packets **1210-1230** are missing. The receiver also can determine from the TotalFragmentsPerSample values for each of the content samples 1 and 2, that two of the missing RTP transport packets **1210** and **1220** belong to content sample 1, comprising nesting IDs 3.x and possibly 4.x. The last of the missing RTP transport packets, i.e., RTP transport packet **1230**, belongs to content sample 2 with an associated nesting ID value of 1.x.

[0071] Other alternative embodiments of the present invention are still possible. In one alternative embodiment, brute force XML fragmentation can be modified by reordering fields in the fragment header. Brute force XML fragmentation can also be modified to specify the minimum possible size of fields in the payload format. This is useful for reducing overhead since certain fields can be longer than the specified values contained in those fields. Brute force XML fragmentation can be further modified by utilizing a different notation for the fields in the payload. Likewise, syntactic XML fragmentation can also be modified by reordering fields in the fragment header. Syntactic XML fragmentation can be modified by specifying a possible size for the fields in the fragment header, where some fields can be shorter or longer than the specified values contained in those fields. Yet again, syntactic XML fragmentation can be modified by using a different notation for the fields in the fragment header. The nesting ID arrangement described above that can be used in syntactic XML fragmentation, can also be varied, although the general idea of storing nesting IDs in the payload is agnostic of the arrangement itself. Priority assignments based on an XML syntactic structure used in syntactic XML fragmentation **2**, can also vary, although like the varying of nesting IDs, the general idea of

determining priority based on the nesting level of the various XML elements is agnostic of the scheme itself.

[0072] FIG. **14** shows a system **10** in which the present invention can be utilized, comprising multiple communication devices that can communicate through a network. The system **10** may comprise any combination of wired or wireless networks including, but not limited to, a mobile telephone network, a wireless Local Area Network (LAN), a Bluetooth personal area network, an Ethernet LAN, a token ring LAN, a wide area network, the Internet, etc. The system **10** may include both wired and wireless communication devices.

[0073] For exemplification, the system **10** shown in FIG. **14** includes a mobile telephone network **11** and the Internet **28**. Connectivity to the Internet **28** may include, but is not limited to, long range wireless connections, short range wireless connections, and various wired connections including, but not limited to, telephone lines, cable lines, power lines, and the like.

[0074] The exemplary communication devices of the system **10** may include, but are not limited to, a mobile device **12**, a combination PDA and mobile telephone **14**, a PDA **16**, an integrated messaging device (IMD) **18**, a desktop computer **20**, and a notebook computer **22**. The communication devices may be stationary or mobile as when carried by an individual who is moving. The communication devices may also be located in a mode of transportation including, but not limited to, an automobile, a truck, a taxi, a bus, a boat, an airplane, a bicycle, a motorcycle, etc. Some or all of the communication devices may send and receive calls and messages and communicate with service providers through a wireless connection **25** to a base station **24**. The base station **24** may be connected to a network server **26** that allows communication between the mobile telephone network **11** and the Internet **28**. The system **10** may include additional communication devices and communication devices of different types.

[0075] The communication devices may communicate using various transmission technologies including, but not limited to, Code Division Multiple Access (CDMA), Global System for Mobile Communications (GSM), Universal Mobile Telecommunications System (UMTS), Time Division Multiple Access (TDMA), Frequency Division Multiple Access (FDMA), Transmission Control Protocol/Internet Protocol (TCP/IP), Short Messaging Service (SMS), Multimedia Messaging Service (MMS), e-mail, Instant Messaging Service (IMS), Bluetooth, IEEE 802.11, Digital Video Broadcast-Handheld (DVB-H), Internet Protocol Device Control (IPDC), Media FLO, etc. A communication device may communicate using various media including, but not limited to, radio, infrared, laser, cable connection, and the like.

[0076] FIGS. **15** and **16** show one representative mobile device **12** for receiving fragment packets. It should be understood, however, that the present invention is not intended to be limited to one particular type of mobile device **12** or other electronic device. The mobile device **12** of FIGS. **15** and **16** includes a housing **30**, a display **32** in the form of a liquid crystal display, a keypad **34**, a microphone **36**, an ear-piece **38**, a battery **40**, an infrared port **42**, an antenna **44**, a smart card **46** in the form of a UICC according to one embodiment of the invention, a card reader **48**, radio interface circuitry **52**, codec circuitry **54**, a controller **56** and a