Recommendation for the implementation of full motion

The Standard: "CD-i Full Functional Specification" describes an Open Standard. This means that the Specification does not restrict itself to a fixed implementation model description, but allows for extensions. However, a minimum functionality must always be provided (the so called Base Case, see chapter VIII)
As stated in chapter A VII.2, Section 2.1.2, extensibility may lead to a high number of configurations, which is very difficult to deal with by application programs. Therefore the Standard allows for preferred configurations.
One of such preferred configurations has announced itself.

In the March 1993 version of the Full Functional Specification the extension Full Motion was introduced. Later on a RAM device was created and added to the list of available DSD's.
Since then several studio's are stressing the importance of these two devices existing always as one extension combination to a Base Case system. The most important reason application engineers have for needing extra memory when the Full Motion extension is being used, is caused by the usage of the various play back speed modes.
Some of them need large chunks of memory in order to guarantee a fluent play back of Full Motion data.

The DSD for the extension RAM (see chapter A VII.2, section 2.6.5.30) has several parameters allowing for flexibility at the implementation level. However, in preferred configurations the amount of flexibility is more restricted in order to guarantee compatibility between discs and players.

Therefore it is **recommended** to all player manufacturers to consider as a **preferred configuration**:

a. the FMV extension as described in chapter IX;
b. a RAM extension the implementation of which leads to a DSD that looks like:

30:RAM00:SZ8:AT150

especially the "SZ" and "AT" strings are recommended.

whereas the RAM extension has to be included when the Full Motion extension is added.

For the implementation of the RAM extension it is recommended that
- the 1M (or more) is contiguous;
- accesstime (ASN⇨DTACK):

mean accesstime	200 nsec
max. accesstime	250 nsec
refresh rate	2%