tends to infinity when k does, for the order of the connectivity of the pair $(F^{k+1}(X), F^k(X))$ and this does not depend on X but only on k.

6.4.4. COROLLARY. If Y is a finite CW-complex of dimension less than $2[k/3]$ then the natural map

$$[C_o(X), C_o(Y) \otimes M_k] \to kk(Y,X)$$

is a bijection.

Proof. Since $F^k(X) = \mathbf{Hom}_1(C(X), M_k)$ is homeomorphic to $F_o^k(X) = \mathbf{Hom}(C_o(X), M_k)$ it follows by Theorem 6.4.2 that the inclusion $F_o^k(X) \hookrightarrow F_o^{k+1}(X)$ is a $2[k/3]$-equivalence. Moreover we know that $\lim F_o^k(X)$ is homotopic to $F(X)$ (3.1.2) and so $F_o^k(X) \to F(X)$ is a $2[k/3]$-equivalence. Consequently the map $[Y, F_o^k(X)] \to [Y, F(X)]$ is one to one whenever $\dim Y < 2[k/3]$.

6.4.5 REMARK Let X, Y, k as above. Then $\pi_1(F_o^k(X))$ acts trivially on $[Y, F_o^k(X)]$. Therefore $[C_o(X), C_o(Y) \otimes M_k] \simeq [C(X), C(Y) \otimes M_k]_1 \simeq kk(Y,X)$.

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