



Correction to: Feature shape complexity: a new criterion for the simplification of feature-based 3D CAD models

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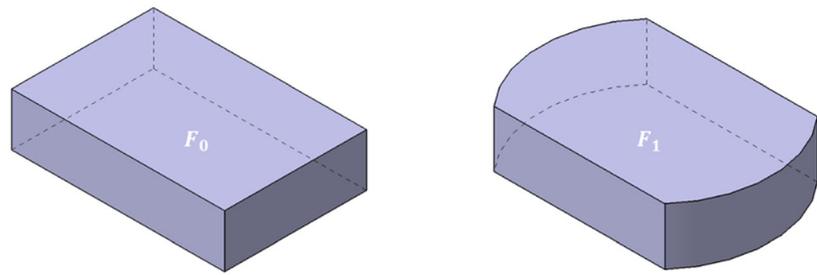
In the original publication, the surface complexity (C_S^i) of F_1 presented in Fig. 4 was incorrectly calculated. The correct image of Fig. 4 is given below and the correct explanation in the paragraph for Fig. 4 is also presented below.

The online version of the original article can be found at <https://doi.org/10.1007/s00170-016-8937-1>

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Fig. 4 Element complexities of two similar features



Feature	Surface complexity (C_s^i)	Curve complexity (C_c^i)	Element complexity (CE^i)
F_0	$6 \times U(\text{Plane}) = 36$	$12 \times U(\text{Straight Line}) = 72$	$108/126 = 0.857$
F_1	$4 \times U(\text{Plane}) + 2 \times U(\text{Cylinder}) = 38$	$8 \times U(\text{Straight Line}) + 4 \times U(\text{Circle}) = 88$	$126/126 = 1$

In the 5th paragraph of the sub clause ‘3.2 Element complexity’, the correct explanation for Fig. 4 is presented below.

“Figure 4 shows a comparison of the CE^i of two hexahedral features. F_0 consists of six planes and 12 straight lines, and F_1 consists of four planes, two cylindrical surfaces, eight straight lines, and four arcs. Therefore, F_0 has a smaller CE^i than F_1 . Suppose these features have the same volume. Then, the FSC of the features will be $FSC^0 = (1/0.857)(1 + 0.857) = 2.167$ and $FSC^1 = (1/1)(1 + 1) = 2$ (i.e., $FSC^0 > FSC^1$). Hence, F_1 will be removed first, because a feature with a higher CE^i

affects the data size of the original model to a greater extent. The introduction of FSC is closely related to the main purpose of research on simplification, where the aim is to preserve the outer shape of the original model and minimize the data size simultaneously.”

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