Correction to: On the Links of Vertices in Simplicial d -Complexes Embeddable in the Euclidean $2d$ -Space

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Correction to: Discrete Comput Geom (2018) 59:663–679
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In the following we refer to the original paper [1]. The main reason for writing this correction is the incorrect statement of Theorem 4. Section 4.1 should be corrected by replacing $[3] = \{1, 2, 3\}$, the set of three points, with $[4] = \{1, 2, 3, 4\}$, the set of four points, everywhere. Moreover, the graph $K_{3,3}$ is replaced by $K_{4,4}$, and K_6 with K_8 . Then the theorem is proved using a lemma analogous to the (corrected) Lemma 2, where the triple intersections are replaced with 4-wise intersections. The analogous lemma is proved by exactly the same method. A proof can also be found in [3], extended version. The resulting bound is indeed asymptotically worse than in the case of embedding:

$$g_d(n) = O(n^{d+1-4^{1-d}}).$$

The statement of Lemma 2 has to be corrected by assuming $m \geq 3$ and setting $t(S) = O(mn^{2/3} f^{1/3}(n) + n)$. The proof should also be modified by assuming $k_l \geq 6$ for all l and introducing a $1/2$ to the right-hand side of (9).

The corrected paper can be found at [2]. The author thanks A. Skopenkov for his interest in the paper and is grateful to him for pointing out the mistakes in it. See also [3].

References

1. Parsa, S.: On the links of vertices in simplicial d -complexes embeddable in the Euclidean $2d$ -space. *Discrete Comput. Geom.* **59**(3), 663–679 (2018)

The original article can be found online at <https://doi.org/10.1007/s00454-017-9936-1>.

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2. Parsa, S.: On the links of vertices in simplicial d -complexes embeddable in the Euclidean $2d$ -space (2020). [arXiv:1512.05164](https://arxiv.org/abs/1512.05164)
3. Skopenkov, A.: A short exposition of Salman Parsa's theorems on intrinsic linking and non-realizability. *Discrete Comput. Geom.* (2019). <https://doi.org/10.1007/s00454-019-00158-y>, extended version: [arXiv:1808.08363](https://arxiv.org/abs/1808.08363)

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