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## Make Your Own Sprites: Aliasing-Aware and Cell-Controllable Pixelization

### Supplementary Materials

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CCS Concepts: • Applied computing → Fine arts; • Computing methodologies  $\rightarrow$  Image processing.

Additional Key Words and Phrases: Pixelization, Generative Adversarial Networks, Image-to-Image Translation

#### COMPARISON WITH THE ORIGINAL MODEL OF [Han et al. 2018]

Since the dataset in [Han et al. 2018] consists mainly of simple clip arts with white background, the original deep pixelization model from [Han et al. 2018] does not perform well on complex scenes that are common in our testing set. This was confirmed by the authors of [Han et al. 2018] through private communication. Therefore, we re-train their model using our dataset to improve the performance. Fig. 1 shows a comparison between the deep pixelization models trained with the original dataset and our dataset, respectively. We can see that the original model results in loss of details and color distortion, while the re-trained model leads to notable improvement of the results.

#### 2 MORE RESULTS FOR CELL-CONTROLLABLE PIXELIZATION

Figs. 2 and 3 show more pixelization results from our method for various cell sizes. Our method is effective across different types of input images and different cell sizes.

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Deep pixelization original

Fig. 1. Results obtained from a deep pixelization model trained with the original dataset and our dataset, respectively. (© Nintendo Co., Ltd., © Tencent, © Bee Square, © Rendered Ideas.)

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Fig. 2. More results from our method in different cell sizes. Better viewed in digital version with zooming. (© Tencent, © morganaOanagrom, © Pablo Hernández and © Bee Square.)

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Fig. 3. More results from our method in different cell sizes. Better viewed in digital version with zooming. (© Tencent, © Extend Interactive Co., Ltd, © Rendered Ideas.)

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