セマンティック画像生成 **Paired-D GAN for Semantic Image Synthesis** Duc Minh Vo (SOKENDAI) Akihiro Sugimoto (NII)



Background: Low level features Foreground: High level features

Generator: different level of features for foreground and background Pair of Discriminators: foreground/background judgement

PROPOSED METHOD



breast and

wings.

yellow.

petals.

stripes.

flower have

light green.

has **reddish**

petals with

yellow edges.

yellow and red







Caltech-200 bird dataset





































Oxford-102 flower dataset

Quantitative co	omparison					
Dataset	Caltech-200			Oxford-102		
Metric	<i>IS</i> (↑)	FGS (\downarrow)	BGS (\downarrow)	<i>IS</i> (↑)	FGS (\downarrow)	BGS (↓)
Paired-D GAN	6.39±0.18	17.26±0.21	9.03±0.06	4.41±0.08	8.81±0.08	8.87±0.04
Dong (ICCV'17)	5.56±0.14	18.60±0.09	11.83±0.06	4.03±0.11	9.71±0.11	9.47±0.14
Yang (ICLR'17)	5.92±1.04	18.34±0.14		3.49±0.04	10.32±0.09	

