Computing Report:

run identifier: local

Parameter Settings GAN.

	Hyper Parameters
architecture	MINIGAN
batch_size	5
beta_1_d	0.5
beta_1_g	0.5
beta_2_d	0.9
beta_2_g	0.9
clip_value	0.1
d_extra_step	3
differential_privacy	True
gp_weight	20
l2_norm_clip	10
lr_d	0.03
lr_g	0.03
n_critic	5
noise_multiplier	0.6
num_microbatches	10

Privacy Guarantees

Epsilon:

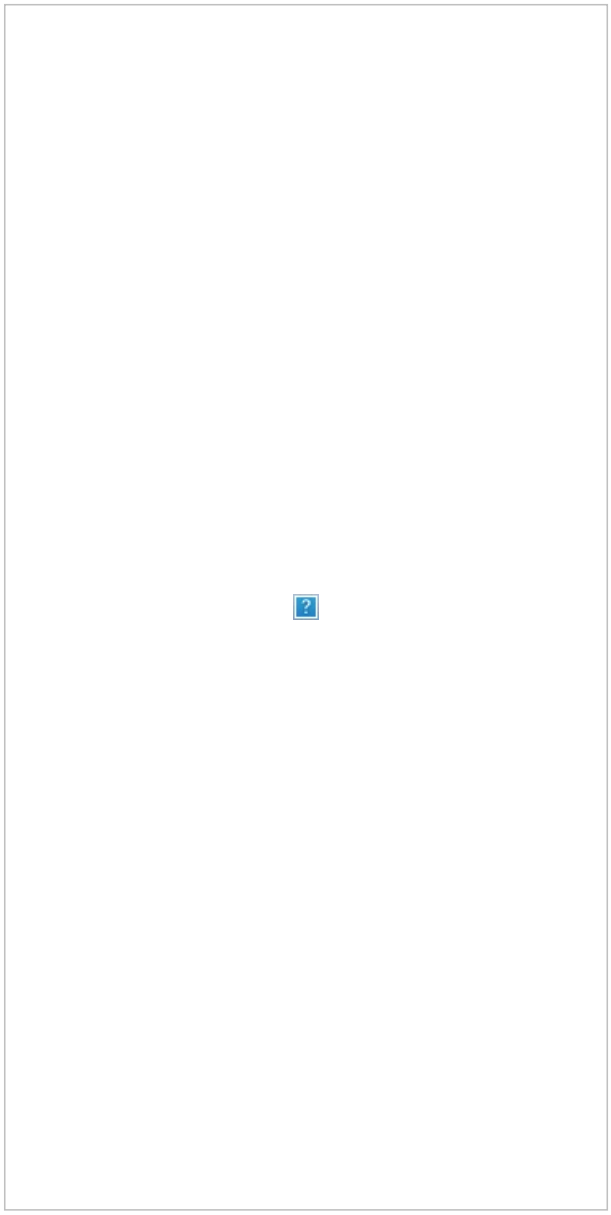
calculate manually

Delta:

calculate manually

Synthetic Data generated by the GAN.

Files for any other train step can be found in the database.



GAN loss visualization

A in-depth analysis can be performed using the tensorboard files.

U-Net

This chapter shows the output and behaviour of the Segmentation network which is used to measure the utility of the synthetic data.

U-Net Results with Test& Train Dataset

		Dice Coefficient (F1-Measure)				Hausdorff Distance			
		mean	min	max	count	mean	min	max	count
utility_run	dataset								
111	test	0.002	0.002	0.002	1	130.035	130.035	130.035	1
	train	0.002	0.002	0.002	1	126.020	126.020	126.020	1
	val	0.002	0.002	0.002	1	129.742	129.742	129.742	1

U-Net Results with Test Images

Some randomly chosen sample outputs.
Files can be found in the database.

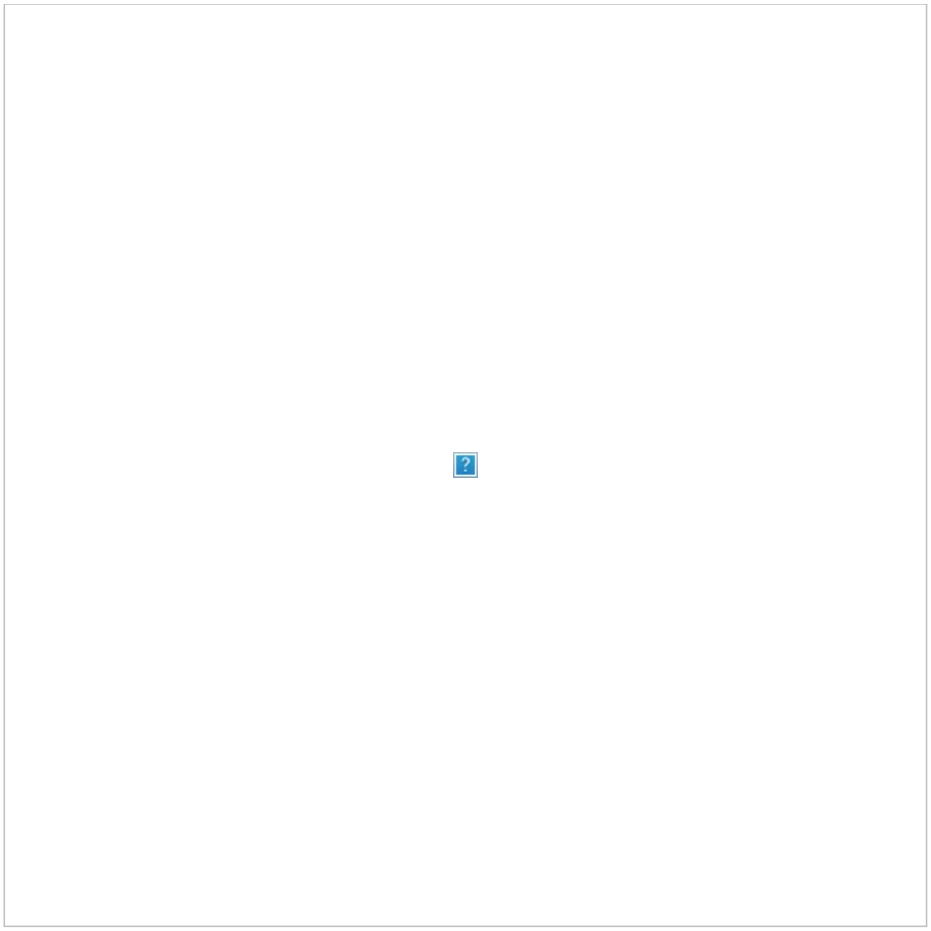
sumtmp775/res1110.jpg

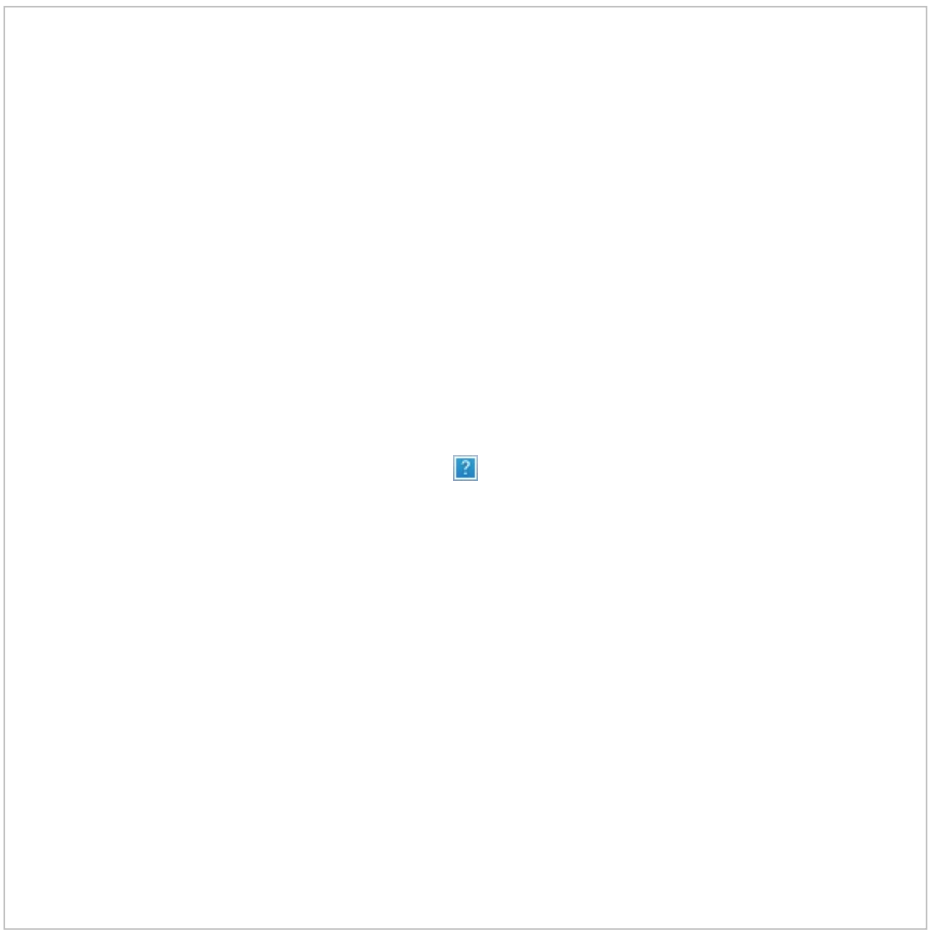
Distances

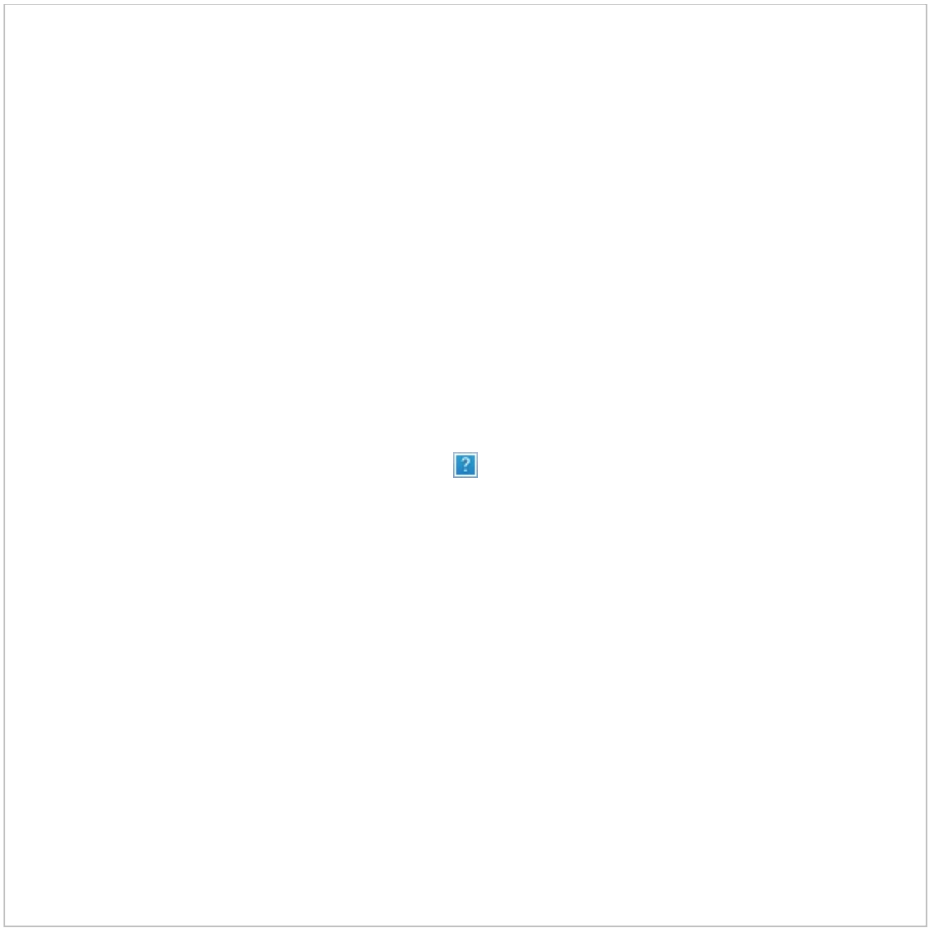
This chapter analyses the distance between the synthetic data and the groun truth.

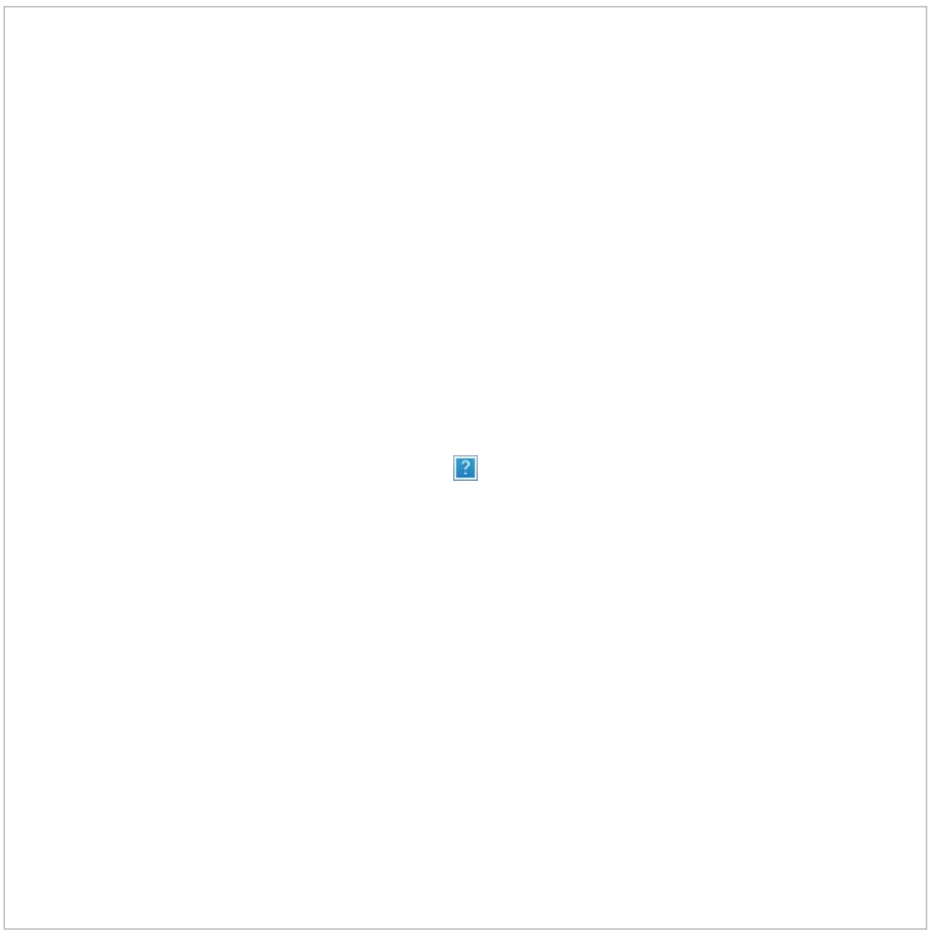
Measured Distances

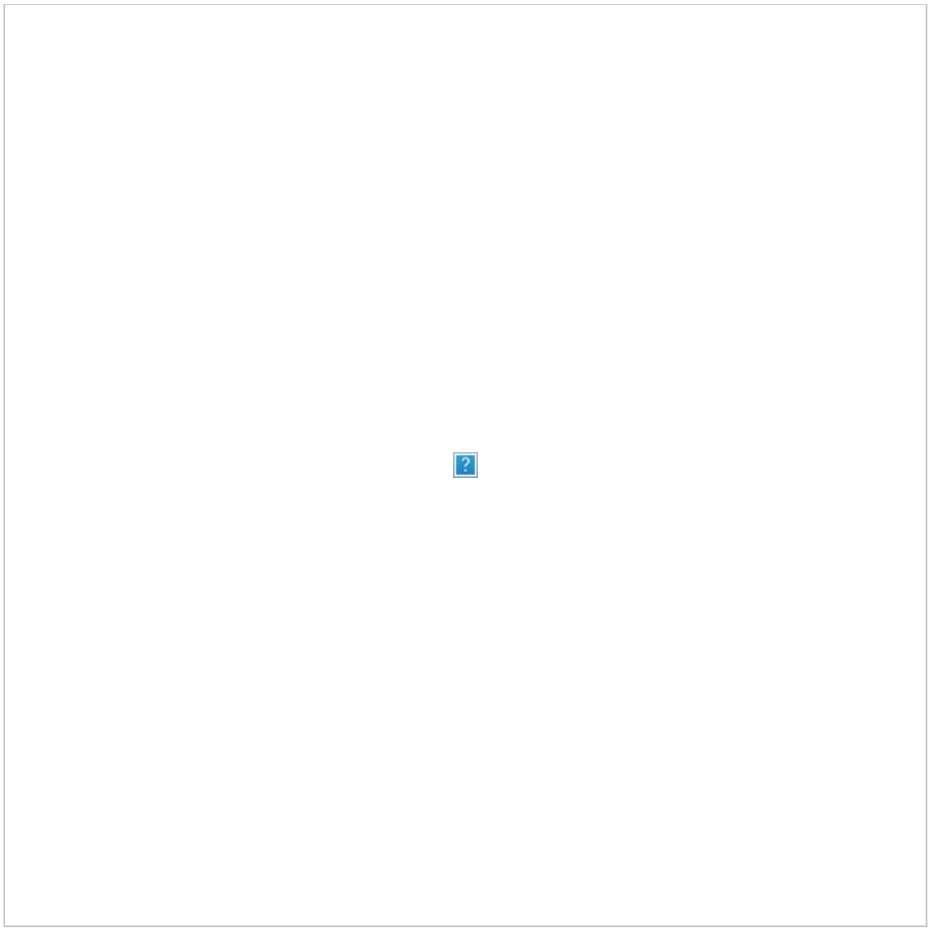
Closest Images

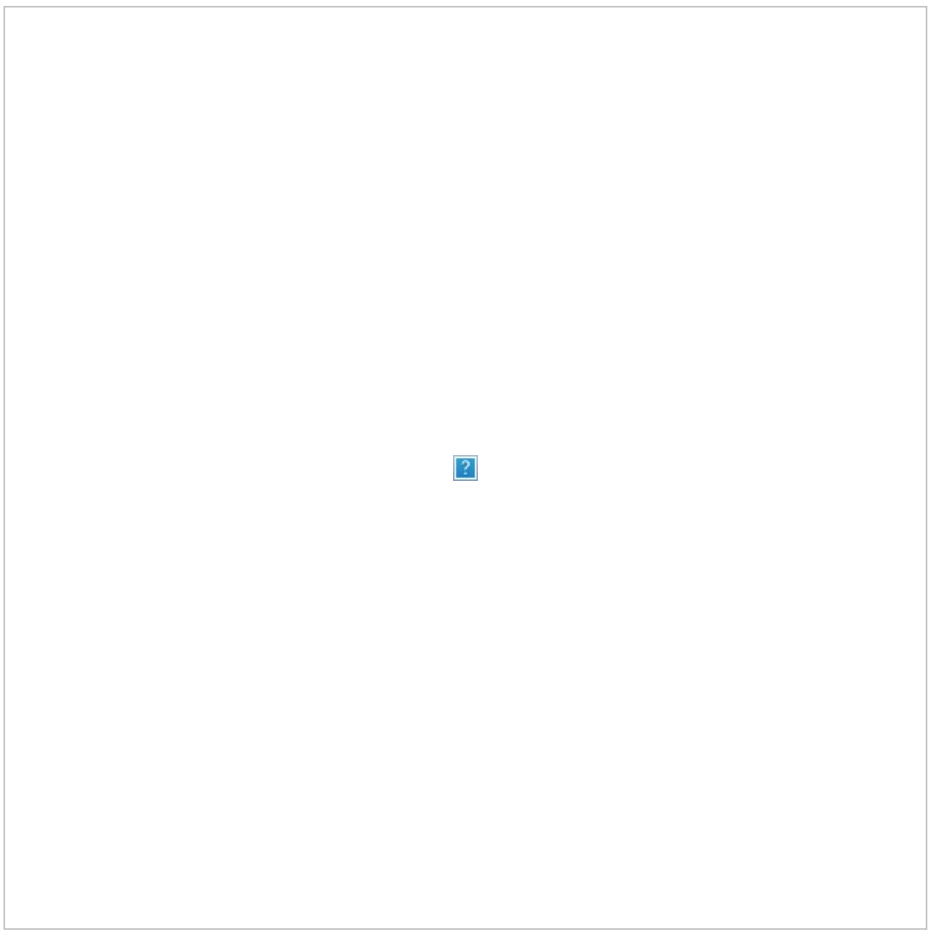


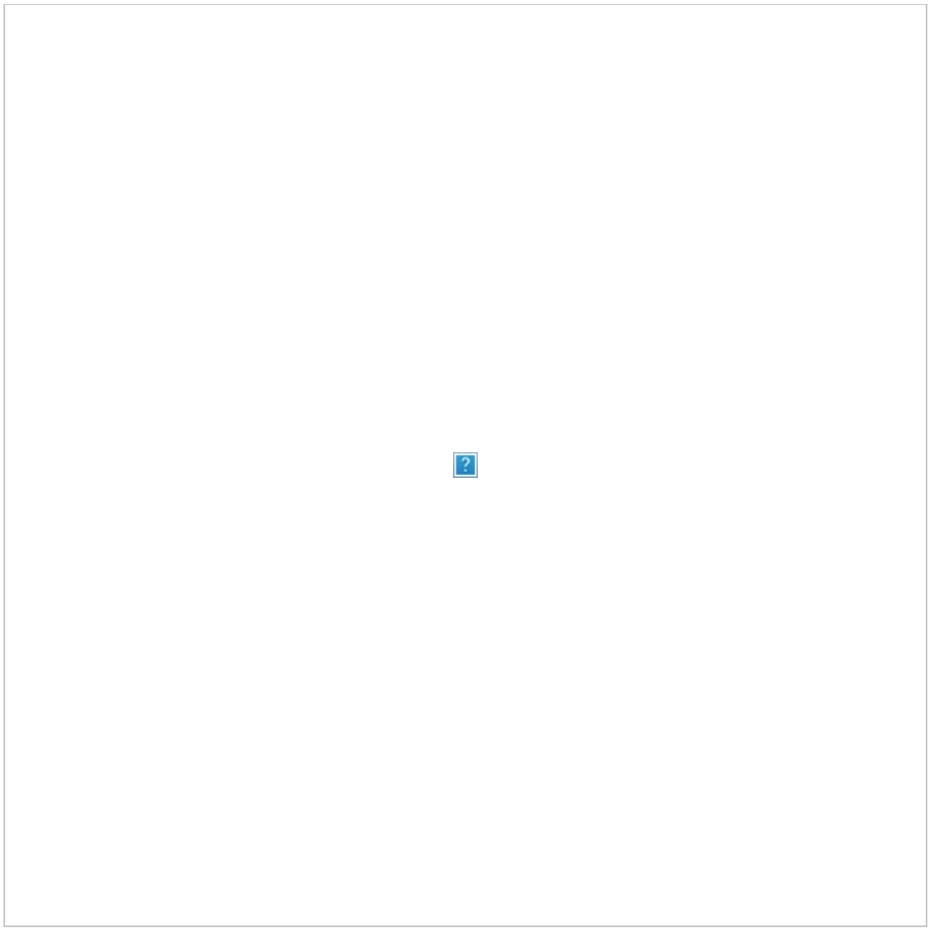


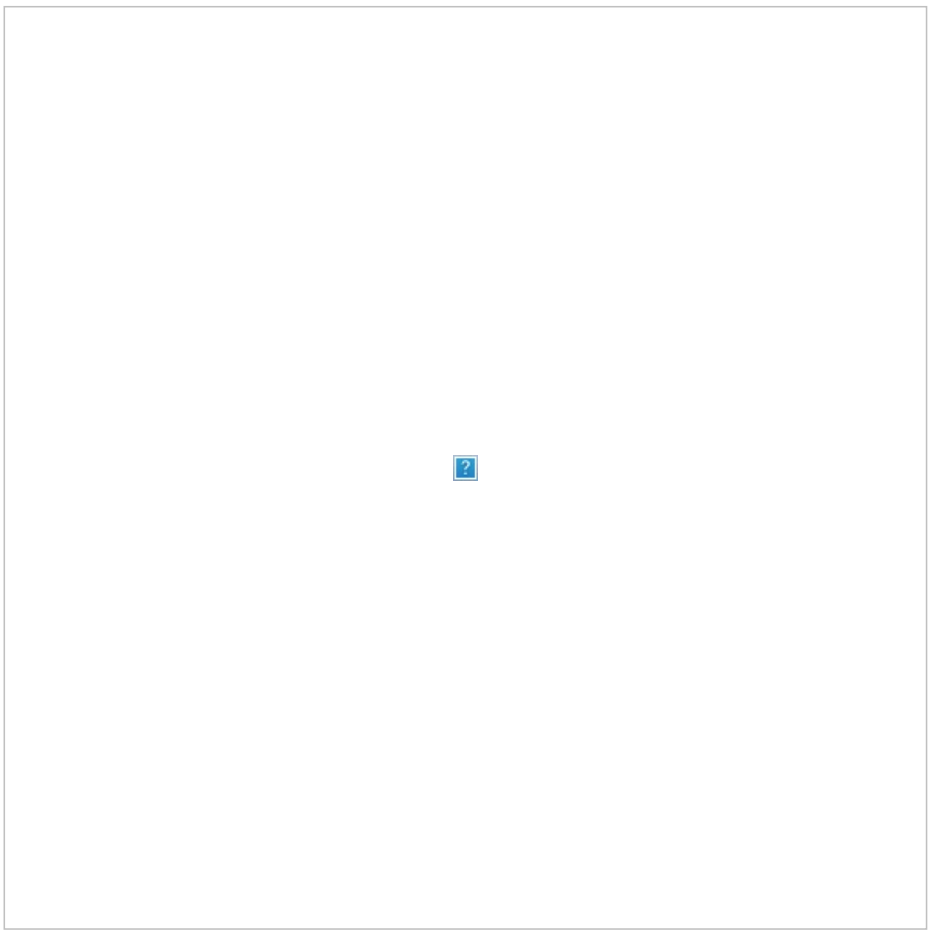


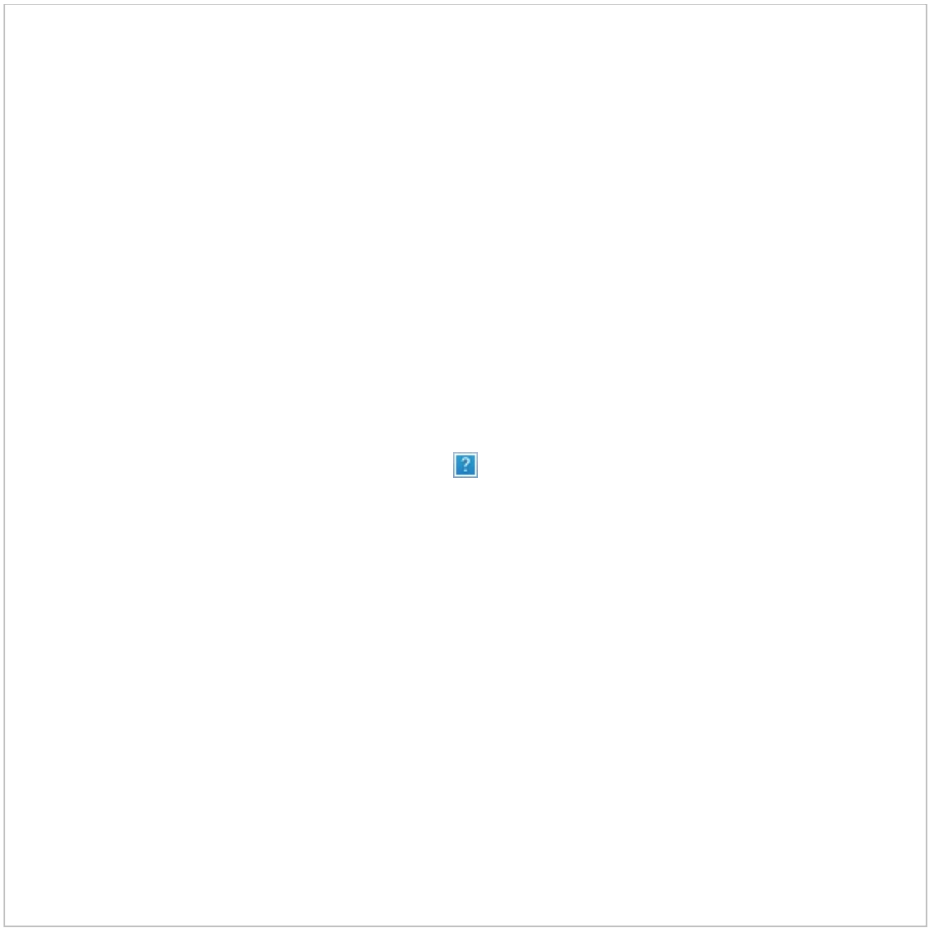


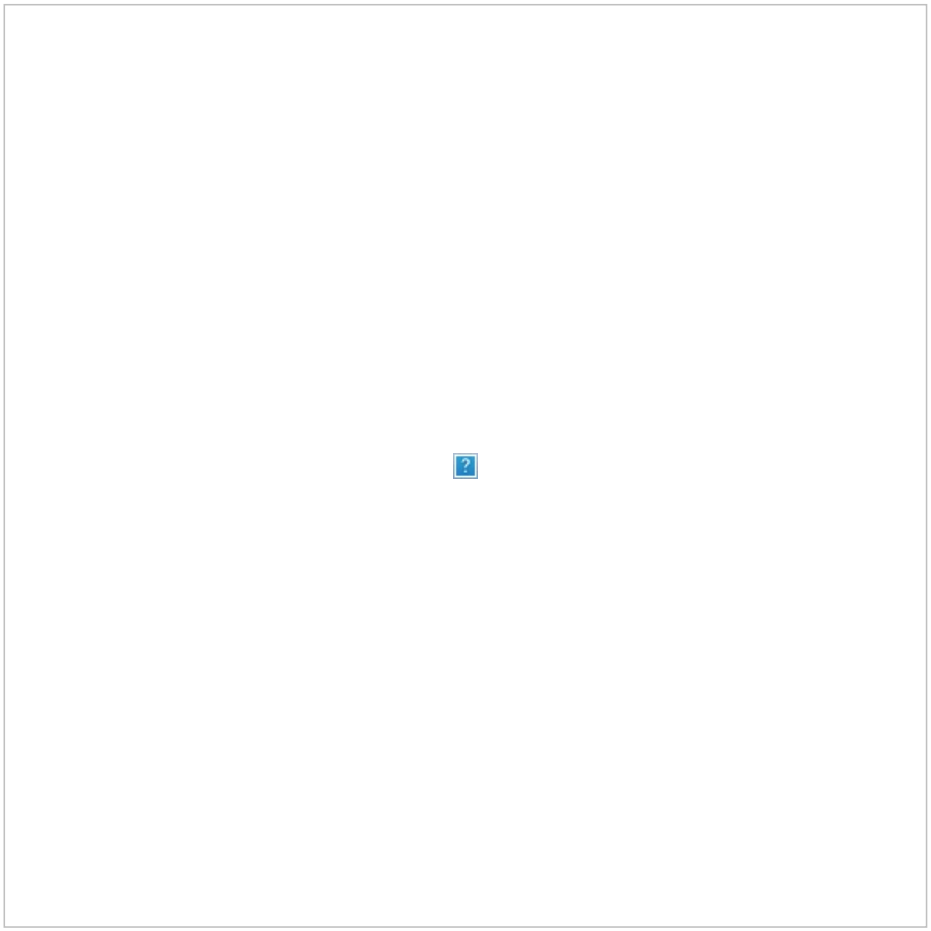












Random Images