1. CONTEXT

The detection of defects in old movies is taking part into a bigger framework including video inpainting [2] for movie restoration. The detection of these defects is proceeded from a specific dataset, which is a movie restored by an expert of the Cinémathèque de Toulouse, with the help of the specialized software DIAMANT-Film.

2. MASK CREATION

The masks of the localization of the defects are often inaccessible because they are intermediate variables hidden in the restoration software, so a first estimation of them had to be made.

3. NETWORK ARCHITECTURE

The architecture of our network is based on the U-net model developed in [3], with 3 frames as input and 7 layers.

The loss function we used for the training of the network is the opposite of the Dice coefficient [1]:

\[
\text{Loss}(y_C, y_U) = -\frac{2 \sum_{i,j} y_C(i,j)y_U(i,j)}{\sum_{i,j} y_C(i,j) + y_U(i,j)} \in [-1, 0]
\]

4. RESULTS ON THE DATASET

⇒ Results on text scenes:

⇒ Results on natural scenes:

⇒ Limitations still to be overcome:

REFERENCES