This study reports on the cross-modal analysis (video and audio) of spontaneous narratives produced by children (9 plus-minus 3 months years old) and is aimed to test the role of empty speech pauses of different duration in children discourse organization. Video analysis was necessary to assess the association between utterance’s meaning and pauses. Empty speech pauses were divided into three categories according to their duration: a) short - from 0.150 up to 0.500 s long; b) medium - from 0.501 up to 0.900 s long; c) long - more than 0.900 s long. Results show that each category plays a different role in the discourse organization, with short pauses and medium pauses preceding utterances containing new added information and long pauses identifying changes in scene, time and event structures, with the functional role of delimitating paragraphs. Chafe (1987) and O'Shaughnessy (1995) hypothesized a similar discourse organization for adult narratives. Interestingly, our results show that such organization is also exploited in spontaneous children’s speech, which use specific pauses durations to mark different discourse structures. Moreover, we found that such different pause durations are a function of the amount of new information contained in the utterances and signal the cognitive effort required to convey such new information. Although the present data may be relevant in assessing the system of rules that underlie pausing means, it should be emphasized that this is a pilot study and that more data are needed to make such a determination.