A Framework for Summarizing Game Experiences as Narratives

Yun-Gyung Cheong  R. Michael Young

Liquid Narrative Group
NC State University

Log Analyzer
Translates a game log into plans
- Parses the log
- Interprets one action into an instantiated plan step using a plan library
- Create a partial plan that contains those plan steps
- Complete the plan by establishing causal links for each step

Skeleton Builder

The Kernel Extractor chooses important events and the coherency evaluator checks a candidate skeleton to see if the content yields a coherent narrative

\[ w(a) = (k_1 \text{In}(a)) + k_2 \text{Out}(a) + k_3 c(a) \]

\( w(a) \): importance of the action \( a \)
\( \text{In}(a) \): returns the number of a’s incoming causal links
\( \text{Out}(a) \): returns the number of a’s outgoing causal links
\( c(a) \): returns a value corresponding to the event’s type

Evaluation of summary
- 32%, System-generated summary is better
- 52%, equally good
- 12%, the subject’s summary is better

Percent of inclusion and rank for each sentence

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<th>Inclusion (%)</th>
<th>Rank</th>
<th>Rank stdv</th>
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</table>

Conclusions and Future Work
The system selected events that constitute a qualitatively strong summary, as evaluated by human subjects

Applications
- Summaries of game logs as well as other types of digital logs (e.g., image, video clip)

Future Work
- Use a real game log
- Extend the system to handle multi-player games

LN Group web page at http://liquidnarrative.csc.ncsu.edu

Email to ycheong@ncsu.edu, young@csc.ncsu.edu for further information