The Problem of Reproducibility in Computer Science

Group 6
Reproducibility in different areas

A 2011 study found that 65% of medical studies were inconsistent when re-tested, and only 6% were completely reproducible.

In computer science reproducibility often boils down to if you can run the code or not on your system.
Problem Description

A new amazing computational method is about to be published by your group:

How should the author make sure that other researchers can reproduce his method and verify the experimental results?
## Autonomy Matrix

<table>
<thead>
<tr>
<th></th>
<th>Degree of reproducibility</th>
<th>Scientific community</th>
<th>Own career</th>
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</thead>
<tbody>
<tr>
<td><strong>Maintain the code for five years</strong></td>
<td>+ Simpler to verify results</td>
<td>+ Can be used for longer time</td>
<td>+ Boost further collaborations - Time consuming</td>
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<tr>
<td><strong>Give away code, without maintenance</strong></td>
<td>+ Results could be verified - Might just run on your system</td>
<td>- Difficult to build on the method</td>
<td>+ Time saving - Further collaboration</td>
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Other remarks

In general, publishers and reviewers rarely test the code given in the supplementary material. This can lead to some abuse from the authors. On the other hand, testing code can be hard and time consuming for reviewers, who are already short on time to review paper.

What should the journal's policy then be?
Thank you