Errata, third printing
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Note: Page and line numbers below are in the SECOND PRINTING.

p. xv:

[[[typo]]]
Section title for 19.2.2 should have *ChandyLamport* without a hyphen.

p. 35:

[[[clarification]]]
p. 35, line 8: "are left as an exercise (Exercise 3.6)".

p. 48:

[[[error (omitted an exercise referred to in the text]]]
Add a new exercise, after the current Exercise 3.5:
"Prove that the total time complexity of the *HS* algorithm is at most $3n$ if n is a power of 2, and $5n$ otherwise."

p. 61:

p. 61, line 19: [[[typo]]] "time is $O\,(diam)$, the number..."

p. 154:

[[[addition]]]
After Exercise 6.5, add another exercise:
"If the *FloodSet* algorithm is run for only f rounds instead of $f+1$, then what is the largest number of different decisions that can be reached by nonfaulty processes?"

p. 155:

[[[addition]]]
After Exercise 6.13, add a new exercise:
If the *EIGStop* algorithm is run for only f rounds instead of $f+1$, then what is the largest number of different decisions that can be reached by nonfaulty processes?

p. 234:

[[[addition]]]
Add a new exercise, after 8.16:

"Consider a channel D, which is similar to channel C on p. 204, except that it allows internal message duplication.

More specifically, in addition to the *send* and *receive* actions, D has two internal actions, *duplicate* and *discard*. When a $send(m)$ occurs, the message m is added to the end of the queue along with a Boolean tag. Tags for successive messages that are sent alternate, $1, 0, 1, 0, \ldots$. A *duplicate* causes an arbitrary message in the queue to be duplicated in place, along with its tag. The channel also keeps track of the tag of the last message delivered. A *receive* delivers the first message on the queue, as before, but only if the tag is unequal to that of the last message delivered. A *discard* discards the first message on the queue, provided the tag is the same as that of the last message delivered. (a) Give formal code for automaton D, in the same style as the other code in this chapter. (b) Prove carefully that D implements C, in the sense of inclusion of sets of traces. Use a simulation relation."

p. 330:

[[[addition]]]
Add another exercise, after the current Exercise 10.23, saying: "Prove that the *Bakery* algorithm guarantees bounded bypass."

p. 425

[[[clarification]]]
line 6: "returned by the second OF THESE TWO SETS of reads (which..."

[[[clarification]]]
line 7: "by the first OF THE TWO SETS of reads"

[[[The following section, until the ***, indicates a collection of changes that would have to be made all together, for consistency. This represents a major simplification of some arguments. The new observation is that we can omit condition 1 in the statement of Lemma 16. It is implied by condition 2, because beta is a sequence.]]]

[[[The coordinated set of changes begins here:

p. 435:

p. 434, line -1: Replace "four" by "three".

p. 435, line 1: Replace "four" by "three".

Statement of Lemma 13.16: Remove the first condition and renumber the others.

After the Lemma, remove the first sentence, explaining Condition 1, and renumber the mentions of conditions 2, 3, and 4 in the rest of this paragraph as 1, 2, and 3, respectively.

Modify the proof to begin with:

"We begin by claiming that for any operation $\pi in \Pi$, there are only finitely many operations ϕ such that $\phi < \pi$. This is because, if there were infinitely many such operations ϕ, then by Condition

1, all of their invocation events would have to precede the response event of β. (The fact that β contains no incomplete operations implies that such a response event does in fact appear in β.) But β is a sequence, so no element can have infinitely many predecessors, a contradiction.

Now we describe how to insert a serialization ....”

p. 435, line -6: Instead of “Condition 1 implies”, say “The claim at the beginning of this proof implies”.

p. 436, line 13: Condition 1

p. 436, line 18: Condition 2

p. 436, line 19: Condition 3

p. 439, line 14: Replace “four” with “three”.

p. 439: Remove the entire proof numbered 1, which spans from line 16 to line -7 on the page. Renumber the remaning three parts as 1, 2 and 3 instead of 2, 3 and 4.

p. 443, line -3: Replace “four” with “three”.

p. 443, line -2 and -1: “Conditions 2 and 3 are immediate, so all we must show is Condition 1. For this, the following...”

p. 444, line -15 and -14: Omit the tiny paragraph “Using Claims 13.24 and...an exercise”

p. 453: Omit Exercise 13.27

p. 444, line 13: Replace “For Condition 2,” with “To show Condition 1,”

p. 580, line 1: Replace “four” with “three”.

*** end of coordinated set of changes]]]

p. 538:

[[[error]]] The arrow in the lower right of the diagram, from the $SimpleSynch_j$ circle to the $C_{j,i}$ oval, is drawn in the wrong direction.

p. 540

[[[error, omission]]]
p. 540, line -11: “occurs in α, and so, by the correspondence, in α', a contradiction.”

(correction error made around line 10)

p. 627:

[[[typo]]]
Section title for 19.2.2 should have *ChandyLamport* without a hyphen.

[[[error (omission)]]]
p. 698, line 12: "message (repeatedly) by sending its..." (Add word "repeatedly".)

[[[error, math]]]
p. 720, line -14: Parenthetical comment beginning with "That is": Remove the parens, and restate this comment as: "More precisely, there are no following SEND, RECEIVE, CRASH or RECOVER events, and there are no unmatched CRASH events."

p. 731:

[[[addition]]]
Add a new exercise, after the current Exercise 22.13:

"Prove that the *Probe* protocol is not message bounded. Do this by showing, for each k, how to produce a complete execution α that has no k-extensions."