

# Erratum

## Constraint Networks

Christophe Lecoutre

ISTE/Wiley

December 8, 2011

1. An obvious bad use of “copy and paste”. Definition 3.28, Page 151, replace every occurrence of generalized arc-inconsistent by generalized arc-consistent. You should obtain:

DEFINITION 3.28.-[Generalized Arc Consistency]

- A constraint  $c$  is *generalized arc-consistent*, or *GAC-consistent* iff  $\forall x \in \text{scp}(c), \forall a \in \text{dom}(x)$ , there exists a support for  $(x, a)$  on  $c$ .
- A constraint network  $P$  is *generalized arc-consistent* iff every constraint of  $P$  is generalized arc-consistent.

Additionally, we have for any constraint network  $P$ :

- A v-value  $(x, a)$  of  $P$  is *generalized arc-consistent* on  $P$  iff for every constraint  $c$  of  $P$  involving  $x$ , there is a support for  $(x, a)$  on  $c$ .
- A variable  $x$  of  $P$  is *generalized arc-consistent* on  $P$  iff  $\forall a \in \text{dom}(x)$ ,  $(x, a)$  is generalized arc-consistent on  $P$ .

2. Caption of Figure 9.2, Page 396. Replace FC-*dom* by FC-*max-dom*.
3. Line 6, Paragraph 2, Page 284. Replace  $O(nd)$  by  $O(nr)$ .
4. In order to avoid the use of an undefined value for  $\text{sup}[c, x, a]$  at Line 17 of Algorithm 20 Page 211, we have to insert:

**foreach** constraint  $c$  of  $P$  **do**

between line 4 and line 5 of the same algorithm. This has no effect on complexities. Thank you to Yves Deville for pointing this to me.

5. I do not know why I forgot to cite [BES 96] when introducing the heuristic *dom/ddeg* Page 394 (second paragraph).

6. Page 197, in Proposition 4.1, if we assume that the (binary) constraint network is normalized, the worst-case time complexity can be reduced to  $O(nd)$  since the last instantiated variable is involved in at most  $n - 1$  binary constraints. Thank you to Liang Zhang from JiLin University for pointing this to me.

Recent updates of this file can be found at <http://www.cril.fr/~lecoutre/>