《面向对象软件度量阈值确定方法研究问题、进展与挑战》附录

**Table A3** Definition and literature sources of object-oriented software metrics——Inheritance

表A**3** 面向对象软件度量定义和文献来源——继承性(20个)

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| --- | --- | --- | --- |
| 度量名 | 年份 | 定义 | 文献来源 |
| ***DIT*** | 1991 | ***Depth of inheritance tree.*** 树继承的深度. 某个类在整个继承的体系中到根结点的最长路径. | Chidamber  等[1] [2] |
| ***AID*** | 1996 | ***Average inheritance depth of a class.*** 某个类的平均继承深度. 若某个类没有祖先(父类), 则AID为零. 除此以外, 其他类的AID是该类若干父类的AID的平均数, 以1的幅度增加. | Henderson-Sellers等[3] |
| ***CLD*** | 1992 | ***Class-to-leaf depth.*** 类到叶子的深度. 在整个继承层次中, 某个类以下的若干子类中, 到叶子的最大数量. | Tegarden等[4] |
| ***NOC*** | 1991 | ***Number of children.*** 直接继承子类的数量. 直接从某个类继承的若干子类的数量. | Chidamber  等[2] [1] |
| ***NOP\**** | 1994 | ***Number of parents.*** 直接继承父类的数量. 某个类的直接继承的父类的数量. | Lorenz等[5]和  Lake等 [6] |
| ***NOD*** | 1992 | ***Number of descendents.*** 后代的数量. 直接或间接继承的子类数量. | Tegarden等[4]  和Lake等 [6] |
| ***NOA*** | 1992 | ***Number of ancestors.*** 祖先的数量. 某个类直接或间接从其父类继承的数量. | Tegarden等[4] |
| ***NMO*** | 1994 | ***Number of methods overridden.*** 方法被重写的数量. 某个类从祖先继承下来被重写的方法数量. | Lorenz等[5] |
| ***NMI*** | 1994 | ***Number of methods inherited.*** 方法被继承的数量. 某个类从祖先继承下来且没有被重写的方法数量. | Lorenz等[5] |
| ***NMA*** | 1994 | ***Number of methods added.*** 增加的方法数量. 某个类中不是继承的、没有重写的方法数量. | Lorenz等[5] |
| ***SIX*** | 1994 | ***Specialization index.*** 专业化指数. SIX = NMO \* DIT /(NMO+NMA+NMI) | Lorenz等[5] |
| ***SPA*** | 1999 | ***Static polymorphism in ancestors.*** 某个类祖先的静态多态性. 某个类及其祖先类中静态多态函数出现的次数. 静态多态函数是指在不同类中定义的函数, 并具有相同的名称和不同的特征(signatures). | Benlarbi等[7] |
| ***SPD*** | 1999 | ***Static polymorphism in descendants.*** 后代的静态多态性. 某个类及其子类静态多态函数出现的数量. | Benlarbi等[7] |
| ***SP*** | 1999 | ***Static polymorphism in inheritance relations.*** 继承关系的静态多态性.  SP = SPA+SPD. | Benlarbi等[7] |
| ***DPA*** | 1999 | ***Dynamic polymorphism in ancestors.*** 某个类祖先的动态多态性. 某个类及其祖先类中动态多态函数出现的次数. 动态多态函数是指在不同类中定义的函数, 并具有相同的名称和相同的特征(signatures). | Benlarbi等[7] |
| ***DPD*** | 1999 | ***Dynamic polymorphism in descendants.*** 后代的动态多态性. 某个类及其子类动态多态函数出现的数量. | Benlarbi等[7] |
| ***DP*** | 1999 | ***Dynamic polymorphism in inheritance relations.*** 继承关系的动态多态性.  DP = DPA+DPD. | Benlarbi等[7] |
| ***NOH*** | 2002 | ***Number of Hierarchies.*** 类层次数量. 该度量对设计阶段的类层次计数. | Bansiya等[8] |
| ***ANA*** | 2002 | ***Average Number of Ancestors.*** 平均父类数量. 该度量表示从某个类继承后类数量的平均值. 其数值等于在继承结构下从根类到所有类的所有路径上类的数量. | Bansiya等[8] |
| ***MFA*** | 2002 | ***Measure of Functional Abstraction.*** 函数抽象度量. 该度量是类继承的方法数量与该类的成员方法可访问的方法总数比率. 其取值范围[0, 1]. | Bansiya等[8] |

\*:与类规模NOP重名, 但定义不同.

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