Concepts

Helmut Simonis

email: helmut.simonis@insight-centre.org
homepage: http://http://insight-centre.org/

ENTIRE EDIH
Insight SFI Centre for Data Analytics
School of Computer Science and Information Technology
University College Cork
Ireland

Constraint Based Production Scheduling

Acknowledgments

This publication was developed as part of the ENTIRE EDIH project, which received funding from Enterprise Ireland and the European Commission.

Part of this work is based on research conducted with the financial support of Science Foundation Ireland under Grant number 12/RC/2289-P2 at Insight the SFI Research Centre for Data Analytics at UCC, which is co-funded under the European Regional Development Fund.

Key Points

- We introduce the core concepts used in scheduling
- Different layers of description
  - Why we are scheduling (orders, products, processes)
  - What we are doing (jobs, tasks)
- Temporal Relations
- Process description
- Problem classification
- Visualization

1 Core Concepts

1.1 Orders, Products, Processes

1.2 Jobs and Tasks

2 Temporal Relations

2.1 Release and Due Date

3 Processes, Bill of Materials

4 Problem Classification

4.1 Job-Shop

4.2 Flow-Shop

4.3 Open-Shop

4.4 RCPSP

4.5 α, β, γ Notation

5 Key Visualization Methods

6 Summary

Summary

- We introduced the key concepts for scheduling problems
- Orders, products, processes
- Jobs and tasks
- Existing problem classifications
  - Academic
  - Limited practical usefulness
- Key visualization methods