

State of Synputer

Project challenges and recovery plan

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Project Challenges

Current issues & risks

- EDC claims non-compliance and threatens legal action (£1,000,000 lawsuit)
- Backlog of 3,000 pre-orders
- Launch is planned for the 1st of December (in a month)

Evolving Requirements

Stakeholders

Conflicting pressures

- **Consumers:** evolved expectations from hardware
- **EDC:** outstanding contractual obligations, enterprise-grade requirements
- **Business:** launch date, reputational risks, profitability

EDC Requirements

Updated requirements for the EDC machines

ID	Requirement	Priority
EDC-01	When delivered to EDC, the system shall support an industry-standard operating system.	High
EDC-02	When delivered to EDC, the system shall support an external keyboard connector.	High
EDC-03	When delivered to EDC, the system shall provide at least 512 KB of random-access memory.	High
EDC-04	When delivered to EDC, the system shall support at least one industry-standard drive with removable media.	High
EDC-05	When delivered to EDC, the system shall provide SCSI expansion capability.	High
EDC-06	When delivered to EDC, the system shall include at least a Motorola 68000-class CPU.	High
EDC-07	When delivered to EDC, the system shall support a minimum of two RS-422/485 serial ports with network capability.	High
EDC-08	When delivered to EDC, the system shall be graphical-user-interface ready.	High

The Easy Approach to Requirements Syntax (EARS) (Mavin, no date)

Consumer Expectations

Based on the results of the marketing research

ID	Requirement	Priority
CON-01	The system shall support advanced graphics with 512 colours at 1024×768 resolution.	Low
CON-02	The system shall support three-channel sound with sample playback capability.	Low
CON-03	The system shall support ports for a mouse and two joysticks.	Low
CON-04	The system shall support execution of games developed for earlier compatible machines.	Low
CON-05	The system shall support a graphical user interface.	Low
CON-06	Where user-requested upgrades are provided, the system price shall not exceed the marketed price by more than 10%.	Low

Business Requirements

Based on the results of the marketing research

ID	Requirement	Priority
COM-01	The system shall be available for sale by 1 December 1983.	High
COM-02	A minimum of 3,000 units shall be produced for initial market delivery at a unit price not exceeding £399.	High

Project Development

Project Assumptions

Dependency on external factors

- Current production rate is stable
- No large-scale cancellation of pre-orders will happen
- Subcontractor is capable of supplying sufficient expansion boards
- GEM environment will release on time
- EDC remains interested in the project completion

Action Plan

Accommodating challenges

- A. Fulfil pre-orders (Revision 1, R1)
- B. Prepare & implement
updated design
for the Revision 2 (R2)

Project Methodology

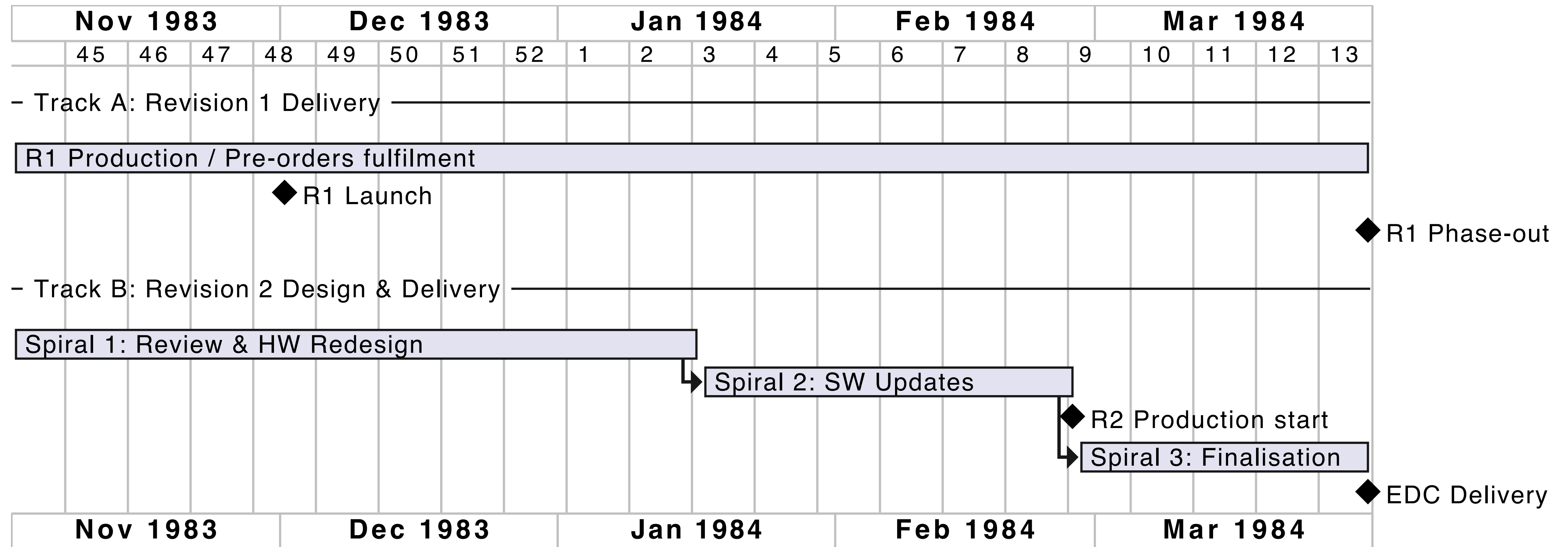
Is Spiral methodology justified?

- Project team is familiar with the methodology
- Project is dynamic, yet has specific milestones
- Regular review is required

(Boehm, 1988)

Project Timeline

Key dates & phases



R2 Changes

Hardware

- Graphics & audio upgrade
- Default RAM volume of 512 KB
- External keyboard support
- Serial ports
- Hybrid storage options: floppy + cartridge
- EDC machines ship with expansion board for SCSI compatibility

Software

- HB/OS as default customer option
- CP/M for business users
- GEM support upon release in November 1984

GUI-Ready & Future-Proof

R2 Cost Price

Based on projected expenses

Role	Days	Internal	Agency	Cost
	Spiral Iteration 1: Requirements & Initial Design			
Project manager	7	1		£1,925.00
Hardware architect	35	1		£8,750.00
Hardware engineer	45	2		£15,750.00
	Spiral Iteration 2: Hardware & Software			
Project analyst	7		1	£1,750.00
Hardware engineer	25	2		£8,750.00
Software architect	20	1		£6,000.00
Software engineer	25	2		£9,750.00
	Spiral Iteration 3: Finalisation			
Project manager	14	1		£3,850.00
Hardware engineer	7		1	£1,925.00
Software engineer	7		1	£2,065.00
Total				£60,515.00

The final cost price estimate is based upon the assumption of delivering 2,000 units to EDC and potential demand for the R2 model.

R1 cost price	£250.00
R2 hardware upgrade cost	£76.00
R2 labour cost	£20.17
R2 Cost price	£346.17

R2 Pricing Strategy

Synputer R2 release on consumer market

R2 selling price will be set at £435

- R2's cost price is higher than R1's
- 9 percent price increase is acceptable for consumers
- Syn remains profitable
- Potential increase in sales will reduce R&D portion of costs
- £88 margin at the start of sales

EDC Strategy

Fulfilling contractual obligations

**EDC machines will be delivered
at no additional cost**

- R1 gross revenue estimated at £449,970
- R1 → R2 upgrade for EDC will cost £232,340
- Potential lawsuit loss is £1,000,000
- Gross project revenue after compensation is £306,460
- Syn prioritises business relationship and future partnership over short-term gains

(Valentinov and Roth, 2024; Silva and Resende, 2025)

References

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