# Pair Programming Concepts and Considerations

Paul Daigle

DealerMatch

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# What is Pair Programming?

## Pair Programming

Pair Programming is the productivity practice of having two developers working at one computer.

#### What's the Point?

Pairing improves overall team productivity by improving focus and fostering an energized working environment.[6]

# Why pair program?

- To improve communication
- To improve the team's capability
- To improve productivity
- To improve product quality

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# Improving Focus

## Interuptions

In general, a pair is better able to return to work after an interuption than an individual[6].

#### **Distractions**

In one study, pairs were found to spend twice as much time using the IDE and half as much time surfing the web or checking email[7].

# Improving Results

#### Reduction of Defects

When pairs work together well, they tend to produce code with fewer defects than single programmers[2].

### **Knowledge Sharing**

Pairing is an effective way to get new programmers up to speed, especially when those programmers are novices to a skill or environment[3].

## **Total Velocity**

Studies suggest that pairing either has little effect on velocity or increases overall velocity[4].



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# Objections from Management

## Pairing reduces capacity

Although it's counterintuitive, the evidence doesn't support this. A single pair is as productive or more productive than two single programmers.

# Objections from Developers I

## Pairing is Difficult

Pairing *is* a skill, but not one that is difficult to aquire[5]. Participants in pairing tend to view the practice positively, even after initial resistance[1].

#### **Process Problems**

- Uncertainty about how to design in a pair
- Need to research privately
- Lack of infrastructure

# Objections from Developers II

## Personality Issues

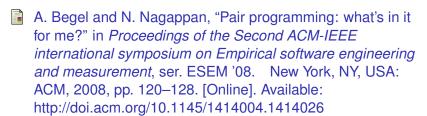
- Toxic pairs
- Pair Marriage
- Mismatched skill level

### Not if, but how

Mostly, these sorts of problems are not problems with pair programming, but with how a particular group manages and supports pair programming.

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# Bibliography I

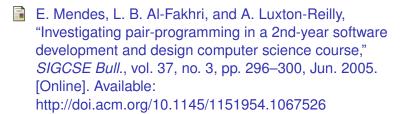


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