Chapter 3 Death by Documentation

Waterfall Software Development Life Cycle -- A process for creating software products with industrial-like precision. The waterfall process has several variations, all of which have phases that are entered once and completed before entering the next phase, as if water cascading down the steps of a waterfall.

Requirements Phase: Document the business goals the product must meet.

Design Phase: Document the system's design which meets the Requirements.

Development Phase: Build the system described in the design documents.

Testing Phase: Test that the system meets the business goals in the Requirements Document.

Deployment Phase: Install the system and put it to use in achieving the business goals.

Glory and Riches: A mad scramble for promotions and stock options if the project is a success.

Every day, Kartar labored to bring co-workers up to speed on what

he could see so clearly: communicating with LG and DeLucca to understand the requirements they would ask for in the future, convincing Noah to agree to the UI architecture and not spend months fighting over it like last time, and getting his team to agree to standards such as documentation and coding conventions.

June, turned into July, and then August and then September, and Kartar was still working to get the Casino to agree to the requirements changes he knew they had wanted last time. So much time would be saved if everyone would just do what he asked.

Those were just his work problems.

At home, he was forced to live his post divorce life all over again: mother, as if he couldn't manage his affairs anymore, demanded he call twice a week; he must wait until next summer before his daughter could visit for summer holiday; and the iPhone, again, was getting a lot of positive press.

On bad days, he'd squeeze his ring until its hardness bit into his fingers--the gold band impressing into flesh a white circle--a symbol of infinity. A promise that was no longer a marriage promise, but a vow that he'd do whatever it took to be a success. This gave him resolve to fight day after day, month after month, challenging everyone to push the Winner to the next phase. The Winner would fix everything--Kartar Patel would be on the front cover of Wired instead of Steve Jobs.

Project status: First week of October. Phase--Requirements Phase.

LG stood over Mr. Kong who was sitting at his desk. "I don't care what Kartar told you--"

"You're the Casino Analyst. Kartar's my boss. I listen to the boss when two people tell me different things. Don't be upset--"

"Just follow the Requirements and don't be a monster. "

"Ha, ha. You know what? No one told me I was being called a big monkey. Prince said I should wear a monkey suit to work for Halloween--"

"That's great! Do you understand why we have Requirements? We use them to focus development."

"If we use a different selector, we could do this in two screens."

"Mr. Kong, because of your boss's overactive imagination, the Requirements are changing a lot. It's better you design to the Requirements because people are putting in overtime to get them right. I don't recall why we wanted to do this in twelve screens, but I guarantee you, there's a reason. See these gift

certificates for the new latte stand? I want to be involved as you document the design so I can make sure you understand what we want. I'm scheduling weekly meetings. When the meeting ends, I'll leave a handful of certificates on the table. I hope they are gone before the next meeting starts. Got it?"

Phyllis leaned against the wall, listening to LG talk to King Kong. She chewed her lip while listening, and once, started to leave, but then shook her head and resumed leaning. When LG left Kong's cubicle, Phyllis caught her attention and said, "I heard you talking with King Kong. You were really doing some horse-trading. Do you think all those screens are necessary? I remember we put twelve in the Requirements because we rushed Kartar through that meeting."

   LG rested her pen behind her ear. "Let me put it to you straight. I've got thirteen years of experience as an analyst on software projects, and sometimes I push for things that don't make sense today but will need for leverage later on. Maybe only three screens are necessary, like Kartar and Kong keep saying, but I guarantee you that sometime before we ship, the Casino will want more screens somewhere in this very complex application. Those extra screens are a savings account on the Gantt chart. When I give Wow a CR and they complain that there

isn't enough time to do the work, I'll sweeten the deal by reducing the number of screens needed for CC Processing." LG dusted her hands together. "Quid pro quo, and everyone's happy."

Phyllis puckered her lips, as if tasting something sour. She straightened from the wall to leave but stopped because LG's lips were shaped in a small smile and her eyes were focused on something only she could see.

LG said "You know, I really enjoy the official tone Rockstar brings to meetings. It's like listening to a BBC report."

"That would be because he's British," Phyllis said before walking away.

It was morning and Rockstar, still feeling the effects of last night's Gun Shooting Knives performance at the Pepper Mill, was feeling slow--slogging through London in rubbers full of water, slow. Prince stepped into his cube and said, "King Kong's right behind me and based on the unhappy look on his face, I think he needs help with CC Processing. Catch a latte afterwards?"

Rockstar just stared at Prince while the words sank in.

Prince said, "Right. Afterwards."

"But I need one now!" said Rockstar.

Kong crowded into Rockstar's cube as Prince turned to go. Prince said, "You're all his now."

"You have no honor!" Rockstar shouted at Prince's back.

Kong made a face and clicked his tongue against the roof of his mouth. "I'm still having trouble getting my CreditCardProcessor class working with your InfoBucket class."

"You're writing code?" said Rockstar.

"Yes."

"You're rather naughty. We're haven't finished the Design Phase. Hell, it's October and we still haven't finished the Requirements Phase."

"Kartar said after Requirements, we'll have a weeklong Design Phase. He wants us to be ready. LG said that after the Design Phase, there'll be change controls in place."

"Change controls! But things always changing! Change controls mean we waste time filling out paperwork," said Rockstar.

"LG told me that design changes would need approval by the directors. How to explain design to people that don't use email?"

"Bollocks mate."

"I want to test my design by building a prototype on top of your's, that you have checked into source control. You tested it?"

"Kong! You're hurting my feelings! I walked through those classes with the debugger. The code's golden!"

Kong clicked his tongue and made a face. "I've been trying to get it working for two days. I don't see the problem."

"Two days? You should have asked for help earlier."

"Two days isn't much coding time. We've got too many meetings and documents to review. Maybe I get only fifteen minutes of coding a day."

"That's why I shuffle into work late and leave late, so I have time to get something actually built. Email me the code you're using and I should be able to get to it tomorrow. Right now, I'm busy coding messaging infrastructure for the architecture. Noah will toss me off the Arch team if I don't finish."

Kong sat in his cube and looked at the code for his CardProcessor class for the umpteenth time. There was a problem somewhere. He just couldn't see it. For a change of pace, he clicked to his email and started through his inbox. Email's

work-related and easy, and maybe an answer to his problem would fall out of the sky. Kong's phone rang before he finished his first email, and the caller ID said it was Kartar.

Kong knew what Kartar wanted. For the last ten minutes, he'd been ignoring a meeting reminder. Kong picked up the phone and before Kartar could say a word, he said, "I have no time for the UI Architecture Design meeting today. I need to work on CC Processing. I've got some troubles."

"Phyllis said you don't have time to attend her Requirements meetings because you're still working on CC Processing's design document. Two months ago, you said it was finished."

"It was. But last week, LG said we will have change controls after the Design Phase. So I need to test it to make sure the design's right."

"Dammit Kong! I said, quick and dirty. CC Processing's requirements are wrong, and the whole thing'll be outsourced. All we need is something quick to keep LG happy until everyone can see I'm right. Drop what you're doing and help us review the UI Architecture Design document. That's what's going to save our collective asses during the Development Phase. And I want to try to finish the Design Phase in one day."

"A day! You said we'd have a week!" said Kong.

"The Gantt shows we've eight weeks to code this sucker

before the Test Phase starts. We'd get another week by
reviewing all the Design Docs and then call them 'complete' at
the end of the day."

**Project status: Date--2nd week of October. Phase--Requirements
Phase.**

While Kartar trolled through today's hundred-or-so emails,
Phyllis strode into his cube as if the building were on fire.
Desperate to get through the email logjam, Kartar stayed focus.
"Give me a sec. I'm reading your email now."

Phyllis didn't wait. "You know I'm your biggest fan. And
it's not just because of those Elvis sideburns and that killer
quiff. Your team's really busy. We're all busier than one-
legged men in a butt kicking contest. I get that they're doing
design docs at the same time we're doing our Requirements docs,
but there's a lot of code being written to get those designs
finished. Isn't it too early to do design? Shouldn't your team
wait until the Requirements Phase is finished? There're a lot
of moving parts and having them all moving at the same time
feels dangerous."

"I've noticed all the coding too. I'll talk to them about
focusing on finishing documentation. If this were a different

project, I'd worry about them doing design while the Requirements are not complete, but trust me Phyllis, this time the Requirements will be exact. If there's a project that could do it, it's this one." He had the inside track.

Kartar was almost through his inbox when LG entered his cube. "Just a second," he said.

   "The Casino can't keep taking this, Kartar, all this requirements out of thin air."

   Kartar lost his train of thought so he gave up and looked at her. LG shook her head with such violence, her locks wiggled like they were tightly wound springs. "Every time I send out a doc for comment, you fill in the margins with 'suggestions.' How do you know the Casino would ever want to change games? Why would the Casino want this 'Whac-a-Mole' game you call Whac-a-Dollar? The Casino wants one, not two or dozens, one, one simple electronic slot game. Is your name LG? No. I'm the one who talks to the Casino. I'm the Lead Requirements Analyst. A simple slots game, Kartar! That's what the casino wants, simple slots!"

Prince removed his shades and stared at the cover of the UI Architecture document while scratching the sunglasses against

his stubbly cheek. The document read like it belonged to a

different project. A lot of the design didn't match with the

Requirements. Kartar kept saying that soon, the Requirements

would match to their design and to trust him. Prince shook his

head. Damn. He and the rest of the developers would be one of

the ones working late nights to build it, not the project

managers.

Prince pushed the eighty-plus page document aside and called

Rockstar. "Let's rap entertainer to entertainer. Why does

Kartar have such a complicated design in section seven?

Couldn't we do this with a few simple classes instead of twenty

or thirty?"

"Sorry mate. I gave up in section three. I'd rather save

my eyes for something more rewarding such as cleaning out ash

bins. Kartar and Noah are bound to have a dust-up when we start

the Development Phase, and when they settle matters, just do

what they want."

"I'm going to talk to our Indian Elvis."

"Go ahead, but remember, the King trumps a prince anytime.

So keep a stiff lip if it's a waste of time."

Kartar stood in Donny's cube, enacting an angry LG, pressing the

backs of his hands against his head and waggling his fingers to

simulate her hair. "She barged into my cube, her big 80's hair
flying and crazy--Yes Donny, I was born here. My parents ran a
motel in LA.

Kartar put his hands down. "I was a victim of the 'big
bangs' 80s. Who do you think had to vacuumed it off the floor
when cleaning rooms? Anyway, you heard her shouting, 'The
Casino wants simple slots! The Casino wants simple slots!'
When was the last time LG wanted simple anything?"

Donny shook his head. "She talks about 'The Casino,' like
she meets with some kind of entity. Maybe it's Jabba?" Donny
watched Kartar closely.

"Yes, I saw Star Wars too. Stop testing me."

"Maybe she will settle for something simple."

"The day we finalize any documents of any kind--
Requirements, Design, or Test Plans--on simple slots, she'll
change the Requirements to add flashy graphics. We do that and
then she'll be back in our cubicals--during the Development
Phase--asking for video. You trust me on that! LG, or the
entity known as the Casino, won't settle for simple anything!"

DeLucca smiled as Noah entered his office and sat down. DeLucca
stayed sitting behind his mahogany desk and said, "I get that we

have three teams and need to split work among them, but explain to me the difference between an architecture and a vertical. Make it easier to understand what's on your shirt. What the hell is 'No place like 127.0.0.1' suppose to mean?"

Noah grinned. "127 dot zero dot zero dot one is the network address for home. So, no place like home." DeLucca shook his head, not getting it. "So your question about architecture, think of a building. No matter what purpose it serves, it needs plumbing, electricity, and phones. These common things are what my team builds. Donny and Kartar's part of the Winner are verticals, meaning, built on top of this architecture. Donny manages data. Kartar builds the games and game experience. Both of those teams need plumbing, electricity, and phones. If Kartar's team built their own plumbing, they would need to develop and debug it to see if it held water. And Donny would need to do the same thing. It's more efficient for the Arch team to build the plumbing once, and in a standard way, so that both teams can benefit. That's half as much coding and debugging. In the future, we'll be able to add more verticals that use the same architecture."

Donny was busy reading email so Kartar leaned over the top of the cubical wall, as if that would be less disruptive than

entering Donny's cube. "When LG comes up with a requirement, she glosses over the details. When I do, every little nuance needs to be explained, documented, and met over. What's up with that?"

"It's been hard understanding all those requirements you've been," Donny winked, "dumping on us." Donny raised his hands as if Kartar would leap the wall. "LG's words not mine."

"I just want the project to go better." Kartar brushes his thumb down a long sideburn. He's been having nightmares about being in the desert, shot in the knee, and trying to outrun the van. This time, it must go better.

"Hello! Whose pair of legs are those?" Donny said, pointing with his chin. Kartar got a glimpse of a tall woman striding away.

Donny sniffed the air. "She even smells beautiful."

The scent was familiar: partly vanilla and partly floral, delicate and expensive. Like a designer brand from the Bellagio that sold for over a thousand dollars.

Why was it familiar? It was too expensive to be something Lisa had used.

"What were we talking about?" Kartar said.

"Have you heard the rumor that the Directors will double

our staff? DeLucca's really taken to your requirements work,
but he doesn't think we can get it done unless we staff up."

"Really? I only knew we're targeting Halloween for
Requirements Complete. If LG wasn't so stubborn, we'd have
finished them months ago."

"If we're doubling staff, then we're doubling costs. The
Casino got a cash infusion from someone. I hear the investor
wants some audit controls."

"How do you hear these things? Your finger's on the
Casino's pulse."

"What I hear is your phone ringing."

Kartar ran to his desk and picked up before it rang to
voice mail.

"Kartar here." It was Prince.

"Kartar, I have a question about the UI Architecture Design
document. Could you come over?"

"Can we do this over the phone? I've an email to send to
LG about requirements."

"You have the doc in front of you? I've version twenty-
three."

"The latest is twenty-six. You're version is old. I'll
tell you what, I'll forward you the latest, finish this email,

and then be right over."

It had been a few weeks since Kartar had visited Prince. Someone else was sitting in Prince's cube and said that Prince had been moved to a different floor. Just as Donny had said, the casino was hiring a lot of new developers. After another elevator ride and wandering around a floor he wasn't familiar with, he found Prince.

Kartar said, "Sorry. I didn't know you moved."

"The Architecture team's taken over that floor. They wanted my cube for a new guy."

"Interesting," Kartar said, wondering why the PM with the shortest line in the Gantt increase his staff. Where was he getting work for all those people? Kartar looked at the document in his hands, and had a bad feeling.

"He's going to steal it from someone," Kartar said.

"What?" Prince said.

That had to be it. The easiest way to get more work is to take it from other teams. The Directors' darling to the rescue, helping out poor struggling Wow and Ka-Ching. That had to be it--Noah planned to extend the architecture.

"What did you want to talk about?" Kartar said.

"Some of these classes look overly complicated. Your

encryption module for instance--"

"I've spent a lot of time working on a design to support what our requirements will be. You and the team have been reviewing my changes every week and you've never said anything until now. Let's have this discussion at next week's Design Review."

"We're doing all this design work before the Specifications have been completed. What if they change?"

"They won't. You, Rockstar, and Kong just need to build to the UI Architecture as designed.""

Prince gave Rockstar a call. "I just talked to Kartar. He wants me to 'present my position' at a design review meeting."

"Congratulations! That's quite the incentive for your trouble! Good luck getting words in edgewise with Kartar and Noah in there. They're in diametric opposition, sort of an Elvis and Pope situation."

"My prototype shows how to do this work more easily. But Kartar really loves his design. It's not worth the fight. Now, I'm with you. Let management do what they want and we'll just build those damn classes."

Project status: Date--3rd week of October. Phase--Requirements Phase.

Kartar stared at the team's design documentation stacking up on his desk. As the team's project manager, he should review it all. He sighed and got to it. He had flipped through one, one-hundred page document when his phone rang. The caller ID showed 'DeLucca,' so Kartar took the call. "Hello, Mr. DeLucca. No, I didn't tell LG I'm to be the source of requirements. She says that when I fill in the details of what she really wants."

Kartar took a deep breath and thought about the Gantt chart the hit women had dumped across his body: two bold lines running parallel represented Wow and Arch, and between these lines, a blue line bounced between them like a game of pong. The blue line moved from Wow to Arch, marking the event when Wow gave Arch the UI Requirements--the capabilities they needed in the architecture to build the casino games. At that point, Wow was blocked from doing meaningful work until the blue line traveled from Arch back to Wow, symbolizing a release of architectural features. But quickly Wow found new, undiscovered requirements that the UI Architecture lacked, so again they sent new requirements to Arch and the blue line traveled back to Arch, the Gantt documenting this game of hot-potato. Arch complained

that Wow was ignorant because Wow's requirements never
documented all the necessary features. Wow complained Arch's
releases took too long and were buggy, and that as long as LG
kept changing requirements, it was impossible for them to have
complete requirements to give to Arch the first time, the second
time, the third time, and so on.

He'd be a deadman, again, if that blue line bounced too
many times.

"Mr. DeLucca, I heard something the other day. Is Noah's
team increasing head count? You know what I think we should do?
Wow wants to help out. My team's got tons of UI expertise and I
was at Palm for all those years. UI Architecture work should be
on Wow's plate. We are implementing the games with it anyway.
I think we could really knock it off quick, and heck, Rockstar's
on the architecture team anyhow for 17% of the time, so he's
been working on it anyhow. And Architecture's budget wouldn't
need to keep growing for more head count. . . ."

**Project status: Date--last week of October. Phase--Requirements
Phase.**

Kartar didn't like what Phyllis had told him when he chanced
into her at the latte stand. To get to the bottom of the

problem, he made a call. "Kong? Are you at your desk? A
little bird told me that you're still working on CC Processing."

"Ah. . . . Yes. LG says the Directors want what's in the
Requirements and she will check that I have all the screens
designed."

"What? The Gantt chart shows CC Design was finished in
August. We're almost through October and you're still working
on something that I told you is going to be outsourced."

"Er--sorry. I wish people would make up their mind."

"Alright, how much time are we talking?"

"I don't want to say."

"I need to know so I can update the Gantt."

"The document's the size of your UI Architecture Design
doc. I wrote a lot of code for the screens in CC Processing--
twelve screens. I must prototype so I know the design is
correct. LG and I meet every week. . . . Kartar?"

"I'm here."

"I thought we were cut off."

"October's almost over, we're still trying to finish the
Requirements Phase, and you've spent every day since June on CC
Processing. Nothing's gotten better! We've better
Requirements, but getting everyone to understand them is slowing

everything down, and you're stuck doing the same thing that you did last time."

"Last time?"

"Never mind. You need to wrap this up today and I don't want to hear anything more about CC Processing."

Rockstar's phone rang. It was Kong--the fifth call today. "Yeah? That's what I'm bloody telling you, Kong, I tested it and it works fine on my computer. Have you got my most recent changes from source control? Oh hell, I need to dash. Noah's headed towards my cube, fiddling with his hair scrunchy, and you know what that means."

Kartar sipped his morning chai and then opened the UI Architecture Design document to make a revision. Even with his knowledge from last time, he kept finding good reasons to refine the design based on his team's feedback. He didn't get far before Donny appeared in his doorway. "Donny, it's too early for you to be here. I'm still waking--"

"You friggen genius! You totally called it! LG was at my cube, mad as hell, because she and Phyllis just finalized the CC Processing design with King Kong and someone in Accounting sent

LG an email about a strategic agreement with Visa, and that Visa would be taking over all CC processing work. And get this--LG tossed that tome onto my desk and it busted my phone!"

"Eighty pages, such a waste. I wanted it simple."

"Phyllis said the Directors are signing off on the Requirements any hour now. What'cha looking through the online Yellow Pages for?"

"A Cadillac dealership. Have you noticed an ad wrapped van in the parking garage lately?"

"Yeah! Jack's Halloween with the Rockettes. I wonder if ol' Nicholson can sing? You've a weird ad-wrap fetish."

It was a 'morning' meeting at 10:00, and Prince and Rockstar were flipping through Prince's design document when Kong entered the room.

Prince said, "Look whose late to my review and has bed hair!"

Kong's eyes flicked between Prince and Rockstar, his clothes rumpled and looking slept in, his posture stooped.

Prince sighed. "No, it's not a rumor. Credit Card Processing's being outsourced."

Kong straightened his back and put his hands on his hips,

his fingertips pointing down, having a slightly feminine effect.

Prince said, "Come on Kong, it's me, Prince. Would I mistreat you like this? Don't answer that!"

DeLucca addressed everyone at the IT Halloween Party, "Congratulations to everyone for their hard work on completing the Requirements Specifications! It's amazing how the Winner has evolved from what we thought we wanted in June to what we have now. The Winner is going to revolutionize how people look at gaming. Because we believe strongly in the Winner, we've gone back for more funding, and they gave it to us. The investor doubled down on his bet and bought insurance too. A representative from Lovers Inc., an auditing firm our financiers insist we use, has started visiting on a regular basis. Please give them your full cooperation. Now, what we've all been waiting for, the winner of the costume contest is . . . Donny! As Flower Power Rambo! I don't think there's ever been so much tie-dye on someone who looked so dangerous."

Project status: Date--November 1st. Phase--Design Phase.

Kartar pinched the ring fiercely. "But Phyllis, I've had my

team working on design documents since July."

"Mr. DeLucca was very clear. He doesn't want teams exiting the Design Phase early. He wants all three teams working in concert as one big, whole, happy project. It doesn't make sense to have the batter ready but no pan built to bake the cookies. And now we have auditors, so it's better to follow the process. Have you met her? Pencil skirt, silk shirt, and pin-strip jacket--all very Ms. Business. What's that look for? You've something against pencil skirts? I think she keeps gold in that svelte clutch she carries. We were going over some project documentation and her clutch was in the way. So I moved it and it was filled with something hard and heavy! The look she gave me--there's an edge about her. Donny's been giving her the smokey eyes."

A few feet from Donny's cube, Kartar thought about his latest nightmare: an ad-wrapped van chasing him through the desert, the roadrunner running alongside him, shouting encouraging words while he fired the fifty-caliber revolver at the van.

The revolver never made a difference in the outcome in the dream or what had happened last time, but it was one thing he could do. One thing he could control.

He decided that direct was the best approach and entered

Donny's cube. "Donny, I know you've a gun in your desk, and I want to borrow it."

Donny's eyes widened as if he was going to deny it, but then he said, "Kartar, although a handgun is effective personal protection, it's against casino policy to bring one to work-- unless you have a good friend in Sec. Is someone after you? Gambling debts?"

"I can't talk about it. Just lend it to me." Like last time, Donny rummaged in his drawer and carefully wrapped it in a a copy of SQL Database Professional, and handed it over.

"Thanks--This isn't it!" Kartar opened the magazine because whatever was inside, wasn't heavy. "What's this? It's too small!"

"Isn't it though? The Colt Pinfire is the smallest production repeating revolver ever made, circa 1880. In Nevada, it's illegal to conceal without a license, but since it could fit in a bottle of ibuprofen, it's unlikely to be noticed. You break it or lose it, you buy it, plus my handling fee."

"But it's so small!"

"I'm worried about giving you something bigger until we talk more."

"OK. Hey, stay away from that auditor. She's bad news.

Trust me on this."

Rockstar and LG sat alone in the meeting room. The room was so silent, a passerby wouldn't realize it was occupied. Rockstar focused on his design document, trying to ignore LG's attentions. She focused on his lips. How they pressed together and pouted a little while he studied her requirements, how his mouth relaxed when he moved to his document, and how they turned into the barest smile when he was able to draw a checkmark confirming his design met the requirement.

Later, Rockstar feeling the temperature had reached an unbearable level, looked up at her. "I could print out a copy for you." He planned to take his time making those copies.

"No, that's OK," LG said. She got up, walked around the table, and sat beside him. "We can share. You're spending a lot of time on this requirement." She leaned into his shoulder. "Is there something confusing? I'd love to change it . . . so it's clear."

Again, his lips pressed together, and then opened as he said, "Well, why just Whac-a-Dollar? Why not whack five, ten, or twenty dollars? A dollar is hardly anything and the time it takes to write the code for one dollar is nearly the same as to design it to handle other denominations."

LG settled into the leather coach in the office while George, Director of Casino Operations, looked over the what she had brought him.

"LG, I'm glad you brought this to my attention. Why are we whacking only dollars? Why whack money at all? How about whacking drinks? That's something of five to ten dollars in value but only costs us one or two dollars. Ask IT if the cost for doing Whac-a-Drink is in alignment with the potential payback. If it is--"

"Make a change request," she said.

LG perched herself on Rockstar's desk. She was wearing a skirt and her crossed legs were in easy view. "Don't be a tease Rockstar. How much more work would it be to do Whac-a-Drink instead of Whac-a-Dollar?"

"It's more complicated than whacking different denominations. I need time to investigate."

"Oh, just give me a ballpark. No commitments. Between you and me--a secret. I promise."

"Ah-OK. Well, now the bar's point-of-sales equipment needs to be integrated into the Winner backend. That's already more

work there. So . . . maybe Whac-a-Drink is five times harder?
But that's just an off-the-cuff. We really don't have time to
add anything new to the Winner. We shouldn't even be talking
about new--"

"The Casino could save five to ten times more on costs
doing this instead of Whac-a-Dollar. The Casino needs this.
I'll put in a change request."

Rockstar stared at LG, her red hair bouncing as she strode
away. "What--what have I done?"

Project status: Date--Jan 2nd. Phase--Design Phase.

Phyllis knocked on Kartar's cube wall and entered.

"Ah, my favorite BA," said Kartar.

"I'm your only BA. Did you have a good New Year's?"

"Just a sec, I'm sending a new design document draft to the
team--OK, finished. I went to a show at Caesar's, drank too
much, and then spent the next day recovering."

"It's good you blew off some steam. Are you ready for
today?"

"Why? Something's happened!"

"I hope your UI Architecture is flexible because LG just documented a lot of requirement changes. Do you want the easy or the hard first? OK, I'll pick. Whac-a-Dollar has become Whac-a-Drink.

"Hmmm. . . . A totally different system than we've had to integrate with before. What's the easy?"

"Ah, there's a new vertical for Casino Operations and an architecture section called Mood Management requires a new piece of hardware: a front facing video camera."

"She can't do that! We finished the Requirements Phase two months ago. We're finishing the Design Phase this Friday and starting development next week. This's completely out of process!"

"She swears the Casino needs these."

"We let in a change now, they'll want to do it again and again. And the hardware vendor's going to pitch a fit!"

"Calm down. It's not as if an angel loses its wings each time this happens. It's just one last change."

"No!" Kartar stood up, his face turning red, framed by long sideburns. The blood vessel running between his eyebrows to his inch thick quiff, throbbed. "It will not be the last change! I'm finally getting it. The Casino's like a five-year-

old: we give in now and they'll ask for more during Development and Testing."

"Come on! You're making a lot out of this."

"I'm telling you that last time, LG made change requests for Requirements all through our Development and Test phases. One damn CR after another. For REQUIREMENTS!

"Last time? You and LG worked on another project?"

"This craziness has to stop. Waterfall doesn't mean IT does whatever the Casino asks. They develop the Requirements and the rest is up to us. I worked damn hard to make sure that this time around, our Requirements had all the CRs she dropped at our feet last time we did this--"

"Last time? Kartar, what last time?"

"They shouldn't be asking for more."

"DeLucca really wants this. He gave the CR its own name: Requirements 2.0."

"But we haven't shipped 1.0 yet! OK! OK! I've finally got it now: It doesn't matter if the Requirements are PERFECT, they'll always find new things to want. Come on! Let's go talk to DeLucca."

"Takes some deep breaths. I don't think this is a good idea."

"We've got to move fast. Come on!"

"An invitation to see Custer at his last stand? No-thank-you! Tell me about it after the dust settles."

Kartar didn't like the ugly color DeLucca's face was becoming.

"I got to be president by taking the latest of what I see and know, and making decisions based on that."

"But sir! The Requirements were declared complete! You, LG, and the entire board of directors signed-off on it at the Halloween party. Your signature's right here."

"Screw the signature! This is about killing the competition! Would you let a signature force you to execute on a bad plan? No! When you see an opportunity, you whack it over the head and take it."

"But we already have great requirements! They contain everything you could want!"

"Kartar, We kept going back to your changes and it took a while . . . damn it took a lot of head scratching, but now we're with you. We didn't realize how great the need is for deploying new games. We were only thinking of simple slots. Then Glenn got excited, saying your additions were something out of his dreams but he'd never fleshed them out with LG. But you had

them in there!"

"Hmm, so those CRs in the Testing Phase were Glenn's fault."

"What?"

"Nothing. So Glenn liked it."

"No, he loved it! He badgered the Directors to figure out what we'd do with it. I mean the Winner's the bomb! Our bomb! We won't get another chance like this."

Kartar's tone was flat: "The requirements I added inspired this Mood Management."

"I'm surprised you aren't taking this very well. These changes are built from the requirements you've been pushing. These new advancements, like adding the video camera, are going to cause a splash like--"

"They are going to cause design changes across the whole project to support this. I don't see how we can do all of this within our schedule."

DeLucca shook his head. "We're still in the Design Phase. That's what this phase is all about--changing and searching for the best design."

"Because we finished most of our design work in November, we've been developing prototypes that are going to turn into our

product. But these changes, well, the guys will end up throwing

away a lot of their work."

DeLucca stepped close, his shoe's toe pressing into

Kartar's instep. The smell of cologne and DeLucca's nose,

inches away, were Kartar's entire world. "Are you telling me

there's going to be a problem because you didn't manage your

team right?"

"I'm saying, six months to do re-design, development, and

then testing isn't a lot of time."

DeLucca's nostrils widened as he snorted. "You worry too

much." He walked over to the latest Gantt covering three walls.

"I know we've added more work but we've added people too. The

Gantt looks fine. Besides, we HAVE to have this. Marketing's

backing Glenn after he promised them Requirements 2.0 would

allow us to pull in double the amount we'd ever thought

possible. Marketing loves it! They want to deliver the right

kind of ads based on how wore out the user's feeling. Noah said

he can do that using fuzzy hellistics-or-something. Marketing

dropped a press release to Wall Street and Sales has advertisers

lining up. They want to sell uppers--well, the legal ones--to

the players when they look tired. They want to run buffet and

food offers when they look hungry. Guest Services is thinking

about using the camera to save walk-outs. The Winner would then

let the guy get a minor win, say ten dollars on electronic slots or Whac-a-Drink--something to get their adrenaline going again-- and keep them playing until we get their last dollar. That means more casino operations need visual dashboards to monitor and support the players, and those dashboards mean UIs beyond what you're team's doing--an Operations Vertical. So Noah's going to develop the UI architecture, and your team stays focused in its vertical, creating the Winner's games on top of the architecture."

Standing still seemed best for taking in DeLucca's words. Kartar counted heart beats. When he got to fifteen, he decided he wouldn't burst. Noah had made his move.

DeLucca chuckled and patted Kartar's shoulder. "There, you look better now. Your color had me worried for a moment, and it's not good to make your president worry. I want to congratulate you on all your help with the Requirements. Keep up the good work, and keep those Design Review meetings cooking a little longer. Get this baby finished by Summer. We're planning a helluva launch!"

As he told Phyllis about what happened, he felt too weak to stand. He leaned his body against her cube wall, and then bent at the waist, his hands on his knees to support his weight.

"You wouldn't believe the glee in his eyes while he bragged about the slew of new requirements. We'll never succeed if we don't adhere to the process. My Baba said, if you look behind the car before you back out, you'll never run over anything, and if you're successful, you'll feel like you're wasting time because nothing's ever run over. But you do it anyhow. Baba was talking about a process, and if it isn't followed, something or someone will get run over. We do this--"

"We'll be taking some steps backward," Phyllis said.

Kartar straightened, anger giving him a second wind. "Right! Against my advice, my team has developed code for practically everything they wrote designs for. Maybe our development is half finished. Requirements 2.0 puts a swath of changes across our designs and prototypes. Continuous change means continual rework and we'll never finished development."

Phyllis said, "We need to lock the requirements down."

"Yes. We need to stop these changes."

Phyllis shook her head. "Kartar, we're screwed. Once the Directors smell money, they chase it like inmates would a hot babe with the keys in her cleavage."

Kartar decided that he had to face the devil himself and called

a meeting with Noah, just the two of them.

Noah held his hands out, palms up, as if saying: how could I have had anything to do with this. "Kartar, I know you have to be as upset as I am. These Requirements 2.0 are completely unacceptable! WDIWT, WDIWT, WDIWT."

Kartar shook his head, knowing Noah didn't talk like that to the Directors. "I'm not interested in fighting. I've given up. The UI architecture is yours. I hope your team honors their commitments to support our team with it." Kartar stared out the window as he spoke, watching the casino parking garage. No trill of surprise coursed through him when an ad wrapped van entered the garage--Valentines at the StarDust. This is how it felt to stand on the gallows, he realized.

Noah said, "DeLucca came to me with that lump of crazy they call Requirements 2.0 after the Halloween party. You would have thought they wanted the Winner to have ESP. The bandwidth these changes demand will blow apart the messaging infrastructure Arch has been building and testing for the past two months."

"You guys have been developing code? We're still in the Design Phase." He repeated DeLucca's words flat and uncaring, because he didn't care. Someone else can get killed this time. He'd keep his profile low. No more arguments with LG, Noah, or anyone.

Noah said, "When we make the design changes to support 2.0, we'll have to backtrack and not only change tens-of-thousands of lines of code, we'll have to smoke test it all so we have something that works when our three teams integrate our work. We'll be starting from square one. There's no way we'll finish this summer."

Kartar nodded. Everyone had broke process. Was it too much to ask to only document the design? Would the Requirements have finished any faster that way? No. The teams were held back by the analysts, the directors, and the project managers trying to get the Requirements correct. Would only documenting have made the Design Phase any faster? Maybe. The team started testing their designs since everything around them was going slow. But writing code or not, Requirements 2.0 means major redesign.

Kartar thought about the Gantt in DeLucca's office and grinned. "It's too early to give up on the release date, don't you think? The Gantt shows us starting the Development Phase next week. You'll be in the same boat as everyone else. According to the Gantt, it could work."

"Your tone says you believe that as much as I do. I know your guys have been writing code too."

"Yeah." Kartar quoted the words with his fingers:

"Prototyping."

"Prototypes are things you throw away. You know as well as I that our teams counted on building the product with that code. How's your team going to feel about their estimates on the Gantt if you toss it all?" Noah said.

"All this re-work. We'll need to re-estimate," said Kartar.

"Yeah. So these new requirements mean days of fiddling with design documents instead of building it. And then it will take days to weeks to review and re-estimate, knowing the Directors have already decided when it will release no matter what our estimates are. Why should we waste a month to confirm what we already know in our hearts: we won't finish this summer."

"Maybe I don't know that," Kartar said. He watched the parking garage, wondering if 'the auditor' arrived in the van with her partner.

"Stop being contrary. We tell the Casino it's going to take an additional year, the backers will drop out. Kartar--focus on me for a moment!" Noah put his hand on Kartar's shoulder, and turned him away from the window. "What I'm saying is, let's keep going like all software projects do--building as much as we can, focusing on the necessary requirements. We'll

keep the good ones. You have to admit, a mood recognition system would be pretty damn cool."

Noah was energized and focused. He didn't brush aside the stray hair that hung across his nose and down to the corner of his mouth. "Eventually even the Directors will see we're going to ship late and they'll get real and focus on only what they need which means we can focus too. We'll ship a year late and the Winner will make this casino great and we'll get promotions. Or the Winner will fail, and we'll take this knowledge to our next job because if not this project, then maybe the next one will be great."

Kartar stared into the dream flickering in Noah's eyes, a dream of being the best at what he does, not just at his company but in the west coast, and he'd do it at any cost, even at the cost of the Casino.

"We'll fix the Gantt to keep them off our backs," Noah said.

Kartar shuffled his feet, feeling his knees going weak. "The auditor--"

"Doesn't know shit!"

Noah reached out as if to shake hands but reached past to Kartar's elbow, and held it in a handshake of brotherhood. "They aren't engineers like you and me. We can fix the Gantt to

get us to summer. That way we can work in peace until then."

Kartar opened his mouth to say, yes, but no sound came out. He held still, stopping everything: his feet, his breath, blinking. He'd agree to anything if it meant he'd see Priya for the summer. Kartar closed his mouth and swallowed. He'd find a way to survive this. "Yes."

Noah nodded and left the room. The dream of glory went with him leaving Kartar in a fog of despondency. He squeezed his ring and thought of Priya going to college and Lisa living with an iPhone engineer.

Noah had said something ingenious and true to life: taking knowledge to our next job so maybe the next one will be great.But last time, Kartar never lived to get a 'next one.'

"I need this project to succeed. But how?"

For a few minutes, Kartar watched the parking garage for the ad wrapped van. It took a hundred steps to walk from the Casino's backdoor to the garage. Another hundred and fifty steps to the elevator, a ride down to the fourth sub-level, and then, finally, he reached his Cadillac. Outrunning the van would be easy. Home free--if he made it. The gun was so light in his jacket pocket, like its firepower was inadequate to pierce the auditor's blouse.

The coast looked clear. It was time to make a break for

home. He turned to leave the conference room, stopping to
pickup his notebook, and he noticed the conference room's
speakerphone was on.

"Anyone there," he said. When no one answered, he repeated
himself and pressed the volume button a few times, but still he
heard no one.

Someone had to be on the other end because the line was
still open. Earlier, Donny had a meeting with the India team.
Perhaps in Bangalore, a phone lay off the hook, forgotten.

He closed the connection and then noticed his finger
smelled odd. Kartar stooped over the phone until his nose
nearly touched the buttons. The scent was vanilla.