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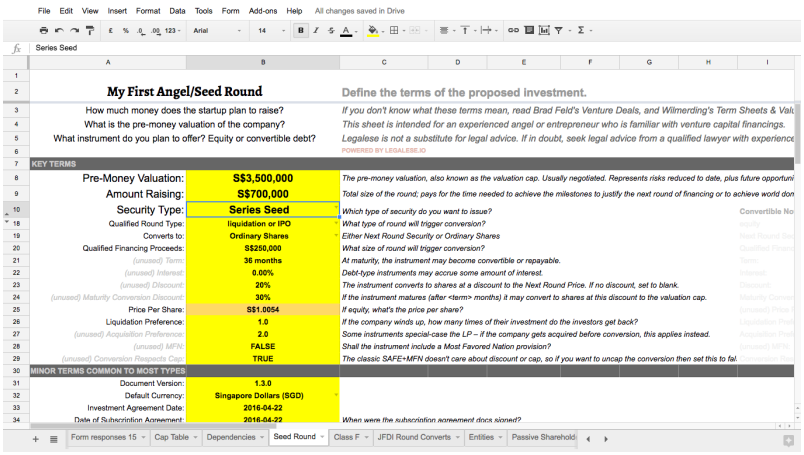
software is eating law



PROBLEM

Legal contracts are essential business infrastructure, but the legal industry is so antiquated and expensive that many customers simply refuse to engage – by some estimates, only 15–30% of people who need help actually go to a lawyer. Instead they try to hack together important paperwork on their own, creating new risks.

Consider a domain close to home: early-stage financings. VC funds can afford law firms, but angel-stage startups often can't. Legal fees can add up to a significant fraction of funds raised. When startups DIY, deal negotiation is slow; drafting is precarious; prerequisites are often omitted; and execution may fail regulatory compliance.

OPPORTUNITY

The centuries-old legal industry still runs its core processes by hand, at $500/hour. Marc Andreessen says software is eating the world. We say software is eating law. Law offline is high-margin, low-volume, human; law online is low-margin, high-volume, automated.

As computer scientists, our fertile insight is that the drafting of contracts is strikingly similar to the development of software. Programmers possess batteries of tools and techniques which, adapted for the legal industry, promise to transform the construction, negotiation, and execution of corporate contracts. If you want a crystal ball for the next 20 years of legal contracts, just look to the last 40 years of programming: HLLs, DSLs, IDEs, event-driven callbacks, unit testing, distributed version control, fuzzing, static analysis, constraint satisfaction, package managers, dependency graphs. Lawyers have no idea what any of those words mean.

SOLUTION

We are creating a new category – computational legal – by building a full legal tech stack, as well as user-facing apps atop that stack.

Our first product – "TurboTax for seed rounds" – is a fully automated SaaS web app that reduces the friction of startup fundraising. A startup with committed investors can configure its deal and get all the paperwork it needs from Legalese, bypassing law firms.

TRACTION

The v1 prototype is a "concierge MVP" document assembly system which has already helped over 24 startups fundraise more than $1M of deal volume. The product is pre-revenue but has proven problem/solution fit. A recent deal that went through Legalese v1 involved 34 separate documents and 106 signatures in total – conversion of prior debt, establishment of ESOP and vesting scheme for founders, notices respecting pro-rata rights, the Series Seed investment itself, and all ancillary filings.

The v2 product will have a fully automated UI, providing online education, scenario visualization, template libraries, signature management, and API integration with state registries.

POSSIBLE BUSINESS MODELS

The v2 product will explore product/market fit. Many revenue models and price points are possible (dollar amounts are indicative):

- Utility pricing: $1 per signature.
- PDFs are free, but we charge $5 per export to Word Doc.
- Github's private repo model for investors and law firms.
- Licenses for on-premise installations.
- Take 1% of the startup's equity if they don't want to pay anything at all.
- Contract lifecycle management and business process integration: we export deliverables to project management / calendaring software.

VISION

Startup financings are just the first of many application domains.

Legalese will do for legal agreements what Intuit did for accounting, what Adobe did for creative design, what Autodesk did for engineering.

End-users will be able to download and configure standard agreements at a fraction of the cost of a human lawyer. Expert users and lawyers can code contracts in a programming language which will compile into English or even to "smart contract" systems like Ethereum. A new wave of opensource contracts will appear on sites like Github. Education and advisory can be built in to the app, in the form of tooltips and peer-to-peer support on StackExchange.

CORE TECHNOLOGY

The secret sauce is L4, a language that does for legal contracts what Postscript did for page layout, what HTML did for the web, what SQL did for databases. Based on the modal calculus, L4 enables legal programming the way the lambda calculus enables functional programming. Unlike existing document assembly systems that blindly compose opaque text strings, L4 makes it possible to express the semantics of a contract, so L4's compiler can detect conflicts within and across contracts. Contracts are "smart" – not just in the sense of running on the blockchain, but by being executable programs in their own right.

For example, when a startup raises an equity round, existing convertible debt needs to be "run": does the new round trigger conversion, and if so, at what price? Today, lawyers run this code by hand, in their heads. With L4, it runs on computers.

MARKET OPPORTUNITY

We estimate corporate practice at $160B globally. Our beachhead: startup investments. While exact figures are hard to come by, 25,000 to 75,000 pre-Series A startup financings happen every year in the US. Probably the same number happen outside, for a total of 50,000 to 100,000 deals per year. If we can lower the cost of a deal from $5,000 to $200 we can make $10M/year on our initial market alone.

Subsequent verticals include employment agreements, conveyancing, insurance, construction, and maritime agreements. As ESOP compensation becomes more widely adopted, new hires are not just employees but shareholders too: we could help manage that relationship (at $100 a pop).

Channels include equity crowdfunding services, government industry-development agencies, and accelerators. We will also reach startups directly through inbound/content marketing, word-of-mouth, and virality via angels.

COMPETITIVE ADVANTAGE

We are commercializing 30 years of academic research in contract formalization (e.g. compk.stanford.edu). We are farther up the learning curve than anyone else on the commercial application of computable contracts. We are starting a research partnership with academia in Singapore (NUS, NTU, I²R) on formal verification and natural language generation against our DSL.

While other smart contract systems are exclusively blockchain-focused, we strive to maintain backward compatibility with the legacy legal infrastructure by compiling to natural language *and* to next-gen systems like Ethereum.

FUNDING PLAN

Angel round in two tranches (Q3,Q4 2016) will raise $250K, to cover v2 product development, run revenue experiments, and iterate the business toward product-market fit within our initial markets, Singapore and UK.

Angel funding will also cover the management of (Inshallah, government funded) v3 R&D on formal methods, compilation to multiple languages, and integration with Ethereum. The TECS POC grant may reimburse up to $250K of v2 product development and v3 R&D.

Our seed round in late 2017 / early 2018 of $2M will cover international expansion to SEA and UK/EU where we may take advantage of innovation-friendly regulation to incorporate as an ABS (Alternative Business Structure). We aim to break even on our seed round.

A $5–10M Series A round in 2019/2020 will cover US expansion and partnership with equity crowdfunding sites.

COMPETITION AND PRIOR ART

Traditional corporate secretaries and law firms facilitate 50,000 to 150,000 seed investments per year worldwide. These vendors include firms with a snazzy online interface (like Futurebooks and DragonLaw) but ultimately run on human labour.

Repositories and document assembly systems like Clerky, Docracy, LawDepot, LegalZoom, Commonform, and CommonAccord are document-oriented, not workflow/outcome-oriented. This includes free investment docs available from YC (SAFE), 500 (KISS), SeriesSeed, and Techstars.

Some services are outcome-oriented but are not easily user-customisable: WSGR's term sheets wizard, CooleyGo, RocketLawyer, termsheet.io, Valcu, Clerky, Lawcanvas, Legal.cf.sg, ShakeLaw, Ironclad, ConcordNow do not permit opensource-style end-user configuration. As a result none of these systems are easily or scalably adaptable to international jurisdictions by a community of third-party developers.

The leading document assembly SaaS, Contract Express, runs on Prolog as a commercialization of academic research. In 2008 Oracle acquired Ruleburst/Haley. Lexifi, a commercialization of related research in contract formalization, now powers financial instruments at many banks.

TEAM

Legalese is running as an opensource startup whose 12+ contributors largely work for free and for equity. The team includes computer scientists, experienced entrepreneurs, angel investors, lawyers, and law students.

Wong Meng Weng – product manager
Computer scientist; angel investor; four-time entrepreneur; previously led opensource / open-standards initiative (SPF) to global adoption; resident mentor at JFDI.Asia; Harvard Berkman Fellow. Developed the first DSL, built the v1 product.

Alexis Natalie Chun Jie Shi – ex-lawyer
Commercial litigator and corporate lawyer experienced in contract negotiation, drafting, and SaaS implementation. Community management.

Virgil Griffith – evangelist
Previously founder of Wikiscanner and OnionLink, and collaborator with Aaron Swartz on Internet infrastructure projects. Branding, PR, website development, recruitment, networking with investors and thought leaders.

Ong Chiah Li – researcher
Previously VC associate and investment paperwork manager at JFDI. Researcher and project manager.

Colin Charles – opensource advisor
Previously with MySQL, from Series B to $1B exit to Sun three years later. Advises team on building a commercial, venture-funded, opensource, enterprise infrastructure business.

Developers & Researchers
Full-stack developers in Singapore and India; computer scientists and language/compiler experts in Singapore and California.

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