

Proposed Royalty Audit Identification Approach for the University of California

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Overview

The purpose of implementing a royalty audit identification process with a defined, data-driven methodology is to help ensure that the University of California is receiving the full benefit of its license agreements. A sophisticated and robust royalty audit program, including a risk-based audit identification process, can provide significant additional value to the University, not only providing the opportunity for significant return on investment,¹ but also provides a continuous feedback loop of information that can be used to increase the efficiency and effectiveness of the licensing process and thereby reducing the risk of underpayments for the use of the University of California's valuable intellectual property. The royalty audit program is also an opportunity for positive engagement with the University's licensees.

This document presents a proposed systemwide approach for identifying licenses for royalty audits. The Office of Ethics, Compliance and Audit Services (ECAS) is the unit responsible for coordinating implementation of the proposed approach in partnership with other UCOP offices and the campuses.

This approach was developed in response to the final report of Regents Working Group on Innovation Transfer and Entrepreneurship,² which noted that "the efficacy of existing enforcement strategies and mechanisms utilized by the University to protect its intellectual property rights needs to be thoroughly reviewed and, if warranted, strengthened," recommending that the University "probe the strengths and weaknesses of the University's existing efforts to protect its intellectual property rights." In developing this proposal, ECAS consulted with technology transfer personnel from other universities, royalty auditors with extensive experience, industry association leadership, and law firms specializing in intellectual property law.

Separately, UC Legal engaged an outside consultant to conduct an enforcement process mapping and benchmark assessment to evaluate how the University is enforcing its patent rights as compared to peer institutions. The results of this assessment were presented to the Regents Special Committee on Innovation Transfer and Entrepreneurship in September 2022. ECAS reviewed the recommendations from that assessment and did not find any conflicts with its proposed approach for royalty audit identification.

ECAS reviewed this proposal with campus technology transfer offices and updated the proposal based on the feedback received. The proposal was presented to the Regents Special Committee on Innovation Transfer and Entrepreneurship in October 2022. In the first half of 2023, ECAS met individually with each

¹ Over the last 14 years, audits completed under UC's royalty audit program identified a total underpayment of approximately \$6.6 million at a net audit cost of \$591K, without a centralized and coordinated identification process in place.

² [From Discovery to Societal Impact: A Roadmap to Unleashing UC Innovation and Entrepreneurship, Regents Working Group on Innovation and Entrepreneurship, May 2021](#)

campus technology transfer office to gain additional insight into campus-based monitoring activities and discuss the allocation of monitoring responsibilities in the future state model. This approach document was further refined based on these discussions. In order to implement this approach, ECAS will require additional resources. ECAS will pursue funding for additional FTE to conduct centralized monitoring activities starting in FY 2024-25.

Contract Provisions

ECAS recommended that the University develop and implement the following required standard terms for all license agreements, through the use of a systemwide standard agreement template, to significantly help to defray audit costs by shifting the cost burden onto the licensee for the University's largest license agreements and for those licensees found to be underpaying the University over a certain threshold. These contract enhancements would strengthen licensees' royalty payment processes by incentivizing them to create the necessary structures and mechanisms to accurately identify royalty payments.

Self-Audit Provision

ECAS recommended that the University should implement a "self-audit" provision requiring the licensee to conduct and fund an independent audit of sales and royalties if annual net sales exceed a defined dollar threshold (e.g., \$5M). In order to ensure that these self-audits are sufficient and effective, such a provision should be reinforced with protocols to ensure that the auditor is independent and that certain minimum requirements for the audit scope and approach are met. Further, ECAS should review the results of these self-audits to determine what next steps, including additional auditing procedures, may be necessary. This provision would not replace the University's right-to-audit clause already standard in most license agreements' Books and Records section.

In May 2023, UC Legal distributed optional language for UC locations to consider when including self-audit language in agreements.

Audit Reimbursement Provision

Many of the University's license agreements already contain a provision requiring the licensee to pay the full cost of any audit that identifies an underpayment over a certain percentage. ECAS recommended that this provision be made required and standard for all agreements.

Risk-Based Monitoring

The first step in a royalty audit identification process is ongoing monitoring to identify license agreements that are strong candidates for an audit.

At the October 2022 meeting of the Regents Special Committee on Innovation Transfer and Entrepreneurship, ECAS presented three options for structuring licensee monitoring for the University:

1. **Centralized Approach: ECAS performs all license agreement monitoring on behalf of the system.** This approach would likely benefit from economies of scale and consistency by having a single unit screen a consolidated and normalized dataset. It would likely also provide for more

efficient and effective mechanism to learn from audit results and adapt monitoring protocols accordingly.

2. **Decentralized Approach: Responsibility for monitoring is assigned to the campuses.** The advantage of this approach is that those performing the monitoring may have more familiarity with specific licensees, license agreements, and industries. It also may facilitate incorporation of additional risk factors arising from day-to-day interactions with licensees that may not be apparent in the available data.
3. **Hybrid Approach: ECAS and the campuses collaborate on monitoring.** Under this approach, ECAS performs monitoring activities at the system level by leveraging centralized data and systems while the campuses perform complementary monitoring activities based on locally available data and location-specific risk factors. The allocation of responsibilities between ECAS and the campuses could vary from campus to campus based on available resources.

Based on extensive consultation with campus technology transfer offices and feedback from members of the Regents Special Committee on Innovation Transfer and Entrepreneurship, **ECAS recommends that the University pursue the hybrid approach.** In its meetings with the campuses, ECAS observed that while many campuses do have some licensee monitoring practices in place, most campuses do not currently perform monitoring activities on a systematic basis due to a lack of available resources. The campuses generally expressed enthusiastic support for centralized resourced monitoring services from ECAS, provided that any interactions with licensees be done in collaboration with the campus. Accordingly, ECAS recommends that monitoring activities be primarily implemented centrally at the system level and augmented by local monitoring activities where capacity is available. ECAS will collaborate with campus technology transfer offices on monitoring and auditing activities requiring licensee engagement.

ECAS has identified the following examples of monitoring activities that can be performed at the system level, pending additional resources:

- **Review of Self-Audit Results:** Review the proposed scope of licensee self-audits, analyze self-audit results to evaluate the adequacy of the audit work, and identify any risk indicators based on the audit results that may require follow up.
- **License Risk Screening:** Perform preliminary risk screening on licenses based on the risk factors developed by ECAS³ to identify candidates for customized questionnaires or audits.
- **Customized Licensee Questionnaires:** Develop, distribute and review responses to customized licensee questionnaires in collaboration with the campuses. In our campus meetings, implementation of customized licensee questionnaires was identified as one of the campuses' best practices. Customized license questionnaires can be used when a licensee is identified as higher risk based on risk screening results or to gather more information to evaluate risk. To develop these questionnaires, ECAS would identify the licensee's diligence and payment obligations in the license agreement. Next, ECAS would review available records to determine if each obligation has been triggered and whether UC has received payment for each triggered obligation. The completed questionnaire would incorporate this information and be sent draft

³ See **Appendix A: Licensee Risk Factors**

form to the campus for final review and distribution to the licensee. Licensee responses would then be evaluated by the campus and ECAS to identify the next steps, such as requests for additional information or initiation of an audit.

- **Licensee News Monitoring:** Monitor news developments for higher risk licensees using tools such as Google Alerts and PitchBook. This monitoring activity would identify potential unreported milestone events that would trigger a new licensee payment obligation, such as a clinical trial, a new product release, or a business combination.
- **Agging Report Monitoring:** Review systemwide accounts receivable and progress report aging statistics to identify unpaid licensee invoices and missing progress reports. ECAS would then collaborate with the campuses on follow up activities such as a notice to the licensee or initiation of an audit.

The centralized monitoring activities will be supplemented by local monitoring protocols using the same uniform criteria (risk factors) used by ECAS in its centralized analysis plus their knowledge of and interactions with the licensees. The level of local monitoring activity can be scaled to available resources. ECAS will work collaboratively with the campuses to avoid any redundant monitoring activities and achieve alignment on licenses identified as high risk for additional analysis and/or follow up action.

Audit Identification and Execution

Based on ECAS' and the campuses' ongoing analysis of risk factors, specific license agreements will be identified as higher risk and potentially subject to an audit. Depending on the overall risk assessment, agreements will be selected in consultation with the campus for either a full audit or a desk audit (which may transition into a full audit).

Desk Audit

A desk audit typically involves the following steps:

- Meet with campus
- Collect relevant documents and information
- Identify licensed products, if possible without engaging with licensee
- Compare available information to license agreement obligations

Desk audits typically result in one of the following outcomes:

- Close (no further action)
- Ask licensee for more information
- Invoke royalty audit clause usually found in the Books and Records section of the license agreement and conduct a full audit

The cost of desk audits varies but averages approximately \$3K per audit. Based upon the experience of outside consultants, approximately fifty percent of these desk audits identify concerns meriting transition to full royalty audits.

Full Audit

A full audit typically includes the steps outlined above plus:

- Create a workplan and budget
- Meet with licensee to gain an understanding of licensed products and accounting systems
- Request, receive, and evaluate information necessary to recalculate amounts due to the University and compare results to actual payments
- Report results

A full audit might also include work with a Principal Investigator or an outside law firm to determine which of the licensee's products are covered by the license agreement. Outside counsel might also be used to evaluate license agreement language interpretation, sublicenses, or other agreements (formal and informal) involving the University's intellectual property.

The cost of full audits can vary significantly but averages approximately \$40K-60K. For license agreements with an audit reimbursement provision, this cost may be reimbursed if the designated underpayment threshold is reached.

Information Sharing

ECAS recommends that the University implement structured internal information sharing protocols on licensee monitoring and auditing activities. Information sharing would allow UC campuses to benefit from the collective knowledge and experience of others and facilitate the maturity of the UC's licensee monitoring and auditing program. It is recommended that the University use existing information sharing mechanisms such as listservs and regular systemwide calls and meetings as platforms to share best practices, techniques, and lessons learned. Topics of information sharing discussions could include:

- New licensee risk factors
- Innovative licensee monitoring techniques
- Fact patterns that led to the initiation of licensee audits
- Auditing and monitoring mistakes and pitfalls
- Challenges encountered in information collection
- Audit outcomes and lessons learned

Required Resources

The system will require additional resources to implement this proposed approach. Accordingly, ECAS will be pursuing funding for additional headcount to support centralized licensee monitoring and auditing activities starting in FY 2024-25. ECAS recommends that additional headcount be added incrementally, and that the return on investment of those resources be considered in decisions to expand the office further. See **Appendix B** for proposed centralized royalty audit staff augmentation

options. Additionally, ECAS will pursue a separate budget allocation to cover the cost of performing royalty audits identified through monitoring mechanisms.⁴

Conclusion

Given the return on investment, the royalty audit has already provided without a coordinated and data-driven approach, consultants have indicated that a more robust and risk-based approach will provide a higher likelihood of a greater return. It is difficult to estimate the anticipated return on investment as there are many variables and unknowns involved. However, if the University implements an approach that provides the opportunity to learn from the results and adapt accordingly, it will increase the likelihood of a higher dollar return, provide the university opportunities to strengthen its processes and documentation, and will encourage compliance from licensees while protecting the public's investment in innovation and entrepreneurship.

⁴ ECAS does not currently have a separate budget allocation to cover royalty audits. Thus, any funding allocated towards royalty audits results in reduced funding for systemwide audit and compliance needs. Further, ECAS incurs the royalty audit program costs without reimbursement, even when additional royalties are identified.

Appendix A: Licensee Risk Factors

The following is a list of licensee risk factors that should be used as uniform criteria in centralized and campus-based risk monitoring activities. These risk factors could be expanded and/or refined as we learn from ongoing analysis and audit results.

License Agreement Risk Factors

Complex Contract Terms

Contract terms that are more difficult to interpret create greater risk of noncompliance and errors in royalty calculations and payments.

Ambiguous Contract Terms

Contract terms that are vague or loosely defined, including the definitions of licensed products, present opportunity for a licensee to interpret the terms in a way that is favorable to them, which could result in underpayments or lost revenue.

Complicated Royalty Calculation

Royalty calculation methodologies that involve complex royalty base calculations, include multiple royalty base elements or an unusual application of the royalty rate increase the risk of error or failure to detect errors in royalty payment calculations.

Time to Expiration

An agreement coming to the end of its term allows less time to evaluate and detect errors before expiration. This creates a higher risk of being unable to detect underreported royalties until it is too late.

Net Royalty Base (vs. Gross)

Royalty calculations based on a net royalty base involving multiple deductions creates opportunity for error or manipulation compared to a gross royalty base.

Unit Royalty Base (vs. Dollars)

Royalties based on financial amounts tend to be easier to validate because you can reconcile to audited financial statements or the general ledger. Royalties based on number of units sold creates more complexity when trying to validate because there may not be an easily accessed and/or reliable source to reconcile to.

Royalty Report Risk Factors

Unusual or Suspicious Pattern in Royalty Payments

A licensee that has unexpectedly stopped paying royalties, or whose royalty obligations are just above or just below the minimum annual amount, or shows an otherwise unusual pattern in royalty payments (e.g., high variability, missed or delinquent reports) may be indicative of a potential underpayment or errors.

Incomplete or Inaccurate Reporting

Royalty reports missing contractually required elements or otherwise incomplete, and those with mathematical or calculation errors, are potential red flags.

Reporting Revisions

More frequent revisions to reports are indicative of a higher risk of error or that the licensee does not have good internal or quality controls in place.

Deductions

Many, unidentified, vague, or large dollar amounts of deductions from gross sales to net sales (royalty base) presents opportunity for intentional or accidental underpayment.

Currency Streams Included in Royalty Payments

The higher the number of countries where the product is sold, the greater the risk of foreign currency conversion and tax withholding errors.

Source of Reporting

If the licensee is submitting reports from an unrelated functional area or frequently changing who is submitting the reports, there is greater risk of error.

Reporting Format

Reports that appear to be manually generated versus system generated present higher risk of human error or manipulated/inaccurate information.

Other Risk Factors**Past Relationship Problems**

Licensees with a history of miscommunication, inaccurate reports, or non-compliance pose an ongoing risk.

Exponential (“Hockey Stick”) Sales Growth

Exponential growth in licensee sales without a corresponding increase in royalty payments may be indicative of an underpayment. However, there is typically a lag between the two. This requires monitoring of publicly available information.

Decreasing Royalty Payments

Sudden or unexpected decreases in the reported licensed product sales and earned royalties could be a sign of errors or misstatements.

Sublicensing

When the licensee sublicenses, there is less visibility into the accuracy of licensee’s submitted royalty reports. The licensee is likely to just accept what the sublicensee reports without any critical review of the accuracy of the sublicensee sales, royalty payments or compliance with the license agreement terms.

New Accounting Systems

Licensees that are converting or have converted to a new accounting system raise the risk of reliance on incomplete or inaccurate accounting information to determine its obligations under a license agreement.

New License Agreements or New Technologies

When a new license agreement starts producing sales of licensed technology, there is a risk that the licensee will misinterpret the definition of a licensee product or the application of the royalty rate in the royalty calculations. The same risk exists when new technologies covered by existing license agreements “come online.”

New Manufacturing Facilities, Covered Products, or Territories

New facilities, products, or territories increase the risk that the licensee’s royalty calculation method will not change to reflect these new covered products.

Recent Product Launches

Product launches leveraging the licensed technology without a corresponding increase in royalty payments may be indicative of an underpayment. However, there is typically a lag between the two.

Business Combinations

A merger or acquisition may result in business continuity issues impacting the accuracy of royalty payment calculations.

Deteriorating Financial Conditions

There is a risk that licensees going through financial difficulties will defer payment of their obligations or that the University will not protect its rights if the licensee files for bankruptcy protection.

Industry

Certain industries may correspond to higher instances of royalty underpayments.

Transparency/Familiarity

The lower the visibility into the company/products/markets associated with the licensee, and the less familiar the licensee is to the University, the higher the risk due to unknowns.

First-time Licensees

Startups or other businesses that have never had a license agreement or reporting obligations could be at higher risk of royalty payment calculation errors.

Complaints

Researchers, vendors, or other third-party complaints about a licensee's lack of earned royalty payments could be a sign of errors or misstatements.

Appendix B: Systemwide Royalty Audit Staff Augmentation

The Office of Ethics, Compliance and Audit Services (ECAS) will be pursuing funding for additional personnel and resources in order to implement its proposed royalty audit identification program. The following analysis outlines three options for ECAS staff augmentation, with estimated productivity for each option. Note that additional incremental personnel resources will allow ECAS to perform more royalty audits internally, thereby reducing the overall cost of royalty audit services, which are currently performed exclusively by external consultants.

The total annual estimated cost for each option is as follows:

Option 1: 1 Auditor and 1 Analyst
Total annual cost: \$392K (\$180K for Auditor, \$100K for Analyst with 40% benefit rate)

Option 2: 2 Auditors and 1 Analyst
Total annual cost: \$644K (\$360K for Auditors, \$100K for Analyst with 40% benefit rate)

Option 3: 3 Auditor and 1 Analyst
Total annual cost: \$896K (\$540K for Auditors, \$100K for Analyst with 40% benefit rate)

A detailed breakdown of the projected risk monitoring services to be performed centrally under each option is included in the table below.

	Option 1	Option 2	Option 3
Additional ECAS Headcount	1 Auditor and 1 Analyst	2 Auditors and 1 Analyst	3 Auditors and 1 Analyst
External Royalty Auditor Relationship Management	Performed centrally by ECAS		
Development and Maintenance of Risk Monitoring Criteria and Methodology	Performed centrally by ECAS in consultation with the campuses		
Self-Audit Review	Detailed review of all self-audits completed for all licenses systemwide		
License Risk Screening: <ul style="list-style-type: none"> • License Agreement Analysis • Royalty Report Analysis • Internal Data Analysis (license revenue, accounts receivable, missing reports or payments, etc.) • External Data Analysis (News articles, industry reports, regulatory filings, subscription databases, etc.) 	Limited screening of top licenses by annual revenue	Expanded screening of licenses based on annual revenue and preliminary risk indicators	Extensive, broad-based screening of licenses including systematic analysis of internal and external data
Number of Customized Licensee Questionnaires Developed Annually	30	60	90
Annual Audits Performed Internally (with quality review performed by external consultant)	6	12	18